ORDER NO.HAD8705149C8

Service Manual

Amplifier

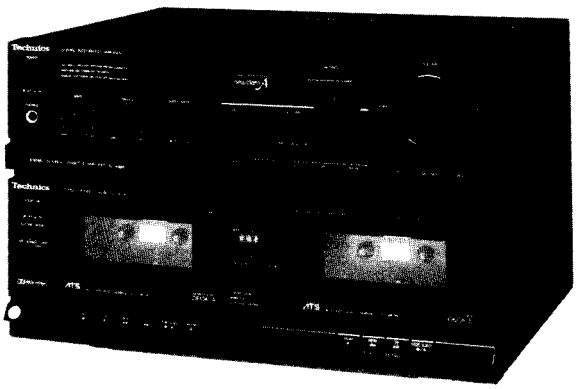
Stereo Double Cassette Amplifier

DOLBY SYSTEM

SU-X830

Color

(K).....Black Type



Area

Color	Area
(K)	(EB).....Belgium.
(K)	(EK).....United Kingdom.
(K)	(XL).....Australia.

SPECIFICATIONS

(DIN 45 500)

■ AMPLIFIER SECTION

40 Hz ~ 16 kHz continuous power output	
both channels driven	2 x 37 W (THD 1%,8Ω)
1 kH continuous power output	
both channels driven	2 x 40 W (THD 1%,8Ω)
Total harmonic distortion	
half power at 1 kHz	0.009% (8Ω)
Power bandwidth	
both channels driven,-3dB	20 Hz ~ 40 kHz (8Ω)
Damping factor	22 (8Ω)
Input sensitivity and impedance	
PHONO	2.5mV/47 kΩ
TUNER	200mV/47 kΩ
CD	250mV/4.8 kΩ
AUX	200mV/22 kΩ
Frequency responce	
PHONO	RIAA standard curve
	30 Hz ~ 15 kHz, +0.8 dB,-0.8 dB
TUNER	15 Hz ~ 50 kHz (-3 dB)
CD	15 Hz ~ 50 kHz (-3 dB)
AUX	15 Hz ~ 50 kHz (-3 dB)
Tone controls	
BASS	50 Hz, +10 dB ~ -10 dB
TREBLE	12.5 kHz, +10 dB ~ -10 dB
SUPER BASS	80 Hz, +6 dB
Load impedance	8 Ω ~ 16 Ω

■ CASSETTE DECK SECTION

Deck system	Auto stop double cassette system
Track system	4-track,2-channel
Heads	
PLAY (DECK B)	Solid Permaloy head
REC/PLAY (DECK A)	Solid Permaloy head
Erasing	Double-gap ferrite head
Motors	DC servo moter
Recording system	AC bias,100 kHz
Erasing system	AC erase,100 kHz
Tape speed	4.8 cm/sec.(1-7/8 ips)
Frequency response	
CrO_2	30 Hz ~ 16 kHz (DIN)
	40 Hz ~ 15 kHz, +3 dB ~ -6dB
NORMAL	30 Hz ~ 15 kHz (DIN)
	40 Hz ~ 14 kHz, +3 dB ~ -6dB
METAL	30 Hz ~ 17 kHz (DIN)
	40 Hz ~ 16 kHz, +3 dB ~ -6dB
S/N (CrO_2 type tape)	
DOLBY NR in	66 dB (CCIR)
DOLBY NR out	56 dB (A-WTD)
Wow and flutter	0.1% (WRMS)
	± 0.2% (DIN-WTD)

Fast Forward and Rewind Time

Approx. 150 seconds with C-60 cassette tape

■ GENERAL

Power consumption	190 W
Power supply	
For United Kingdom and Australia	AC50 Hz,240 V
For Belgium	AC50 Hz,220 V
Dimensions (W x H x D)	360 x 279 x 292 mm
Weight	6.4 kg

Notes:

1. Specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).
3. Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D system are trade marks of Dolby Laboratories Licensing Corporation.

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

■ LOCATION OF CONTROLS AND FUNCTIONS

Amplifier section

Volume/balance level indicators (VOLUME/BALANCE)

These indicators usually show the volume level; when the balance control is pressed, however, the position of balance level is displayed for five seconds, after which the display returns again to indication of the volume level.
When the muting button is pressed, the indicator corresponding to the maximum displayed volume level point will flash.

Super-bass tone control (SUPER BASS)

The low-range sound can be reinforced when this button is pressed.

Tone controls (BASS/TREBLE)

The bass control is for the low-frequency sound range, and the treble control is for the high-frequency sound range.

Input selectors (INPUT SELECTOR)

These selectors are used for selection of the program source (tape, disc, or radio broadcast).

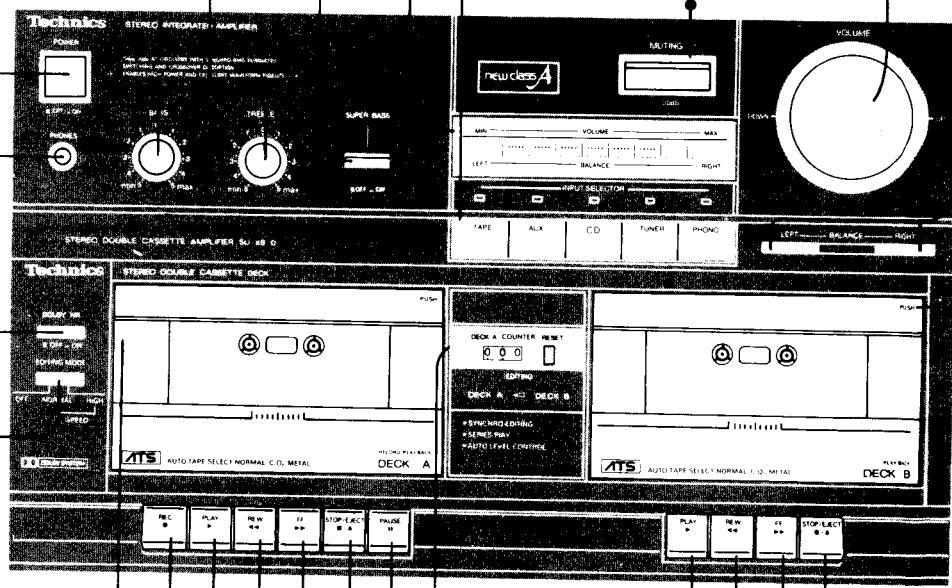
Balance controls (BALANCE)

While listening to an AM broadcast or a monaural FM broadcast, balance the sound so that it seems to be heard from the center, between the speakers.
If both ("LEFT" and "RIGHT") balance controls are pressed at the same time, balance will be set to the center position automatically.

Volume control (VOLUME)

Muting button (MUTING)

Press this button to temporarily reduce the volume level. The volume level is attenuated by 20 dB. (approx. 1/10)



Power switch (POWER)

Headphones jack (PHONES)

Cassette deck section

Dolby noise reduction switch (DOLBY NR)

Editing mode selector (EDITING MODE)

When using "DECK A"

Cassette holder

Record button (REC/●)
Press this button to record.

Playback button (PLAY/▶)

Rewind button (REW/◀◀)

Fast-forward button (FF/▶▶)

Stop/eject button (STOP/EJECT/■/⏏)

Pause button (PAUSE/❚❚)
Press this button to temporarily stop tape movement.

"DECK A" counter/reset button (DECK A COUNTER/RESET)
This indicates the amount of tape travel of "DECK A". When this button is pressed, the readout will be reset to "000".

When using "DECK B"

Playback button (PLAY/▶)
Press this button to playback a tape.

Rewind button (REW/◀◀)
Press this button to rewind the tape rapidly.

Fast-forward button (FF/▶▶)
Press this button to advance the tape rapidly.

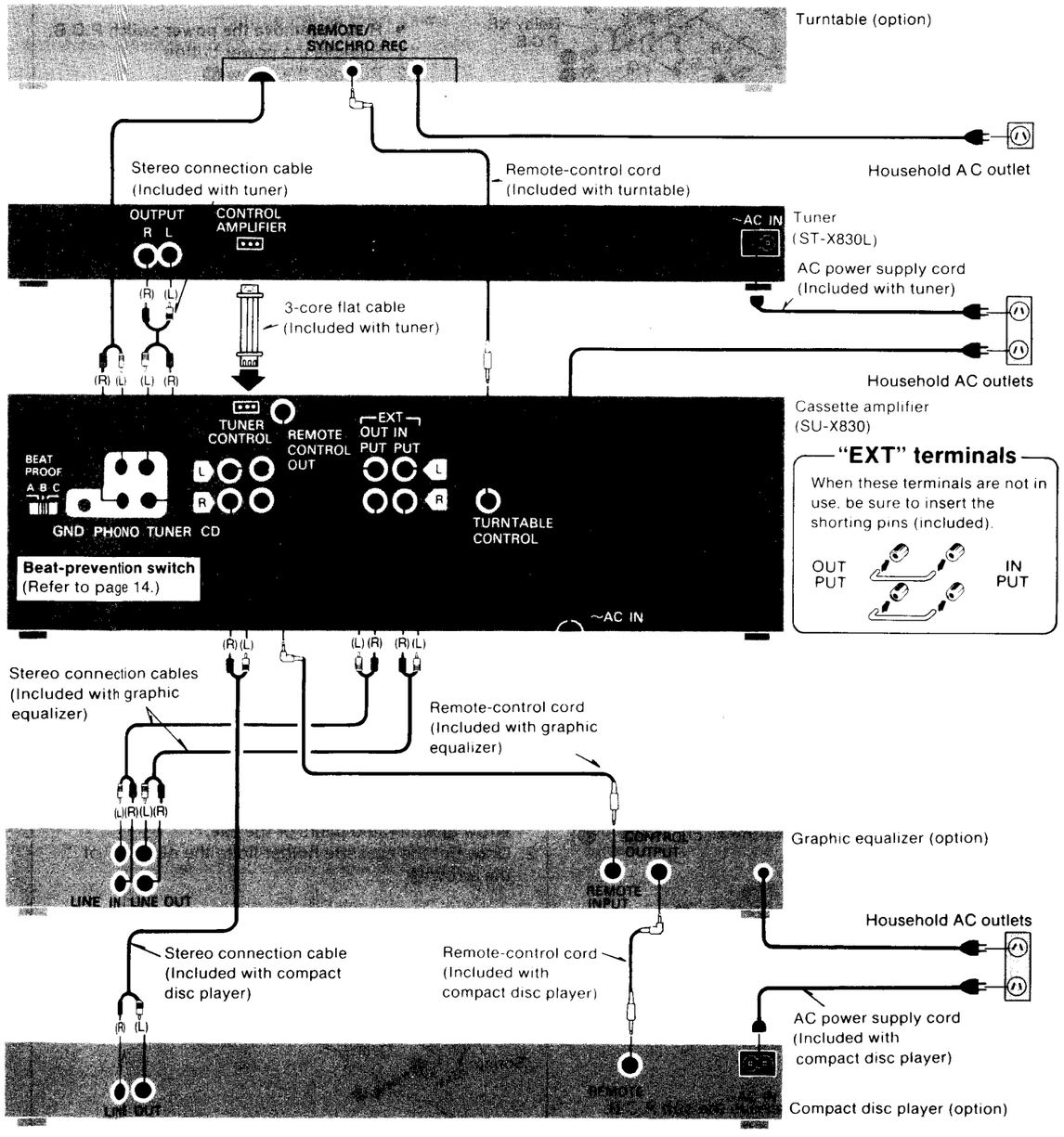
Stop/eject button (STOP/EJECT/■/⏏)
Press this button to stop the tape and to open the cassette holder.

Cassette holder
Be sure to press the upper right side of the cassette holder (marked "PUSH") to close it.

■ CONNECTIONS

Stereo system components and their connections

- For a turntable with a ground terminal, be sure to connect the ground wire to the "GND" terminal of the cassette amplifier. (Refer to the operating instructions of the turntable.)
- If the graphic equalizer is not used in combination with these components, connect the remote-control cord of the compact disc player to the "REMOTE CONTROL" terminal ("OUT") of the cassette amplifier.



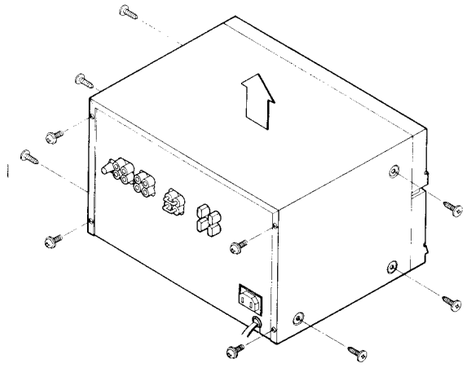
■ BEFORE REPAIR AND ADJUSTMENT

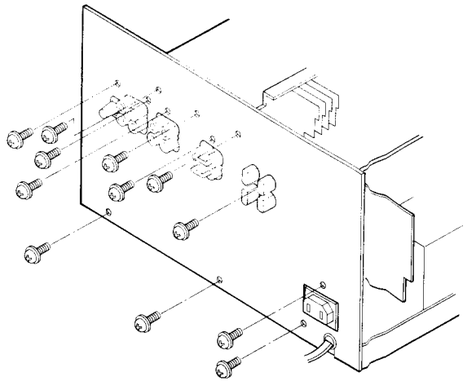
1. Turn off the power, Discharge both power supply capacitors (C702, C703 3300μF) through a 10Ω 5W resistor to ground. Do not short between C702 and C703. It may damage the capacitors.
2. After completion of repair, slowly apply the primary voltage by using a variac to avoid over current. Current consumption at 50Hz/60Hz in no signal mode should by shown with respect to supply voltage 220 V/240 V.

Power supply voltage		AC 220V	AC 240V
Consumed current	50 Hz	45 ~ 145 mA	40 ~ 140 mA

■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1	How to remove the cabinet	Ref. No. 2	How to remove the rear panel
Procedure 1		Procedure 1 ➧ 2	
1. Remove the 10 screws. 2. Remove the cabinet in the direction of the arrow.		1. Remove the 12 screws.	

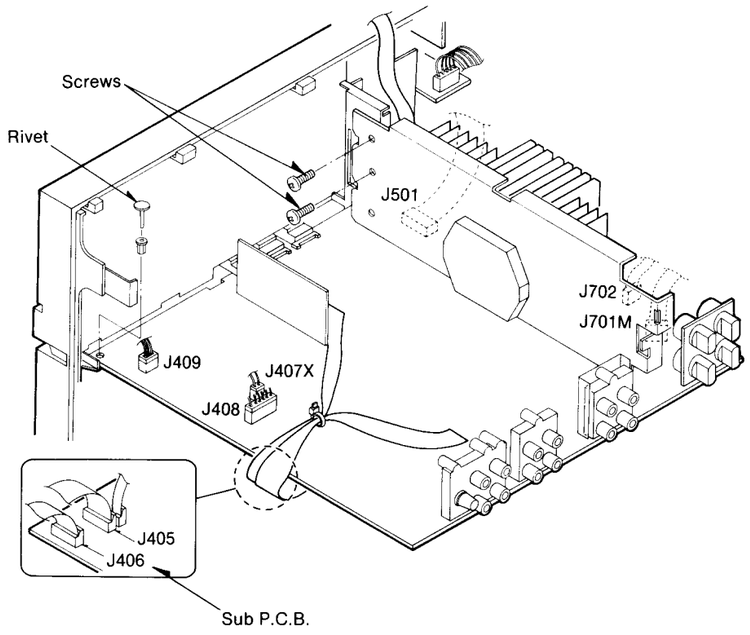




Ref. No. 3 — How to remove the main P.C.B.

Procedure 1 ➧ 2 ➧ 3

1. Remove the 8 connectors (J405, J406, J407X, J408, J409, J501, J701M, J702).
2. Remove the 2 screws.
3. Remove the rivet.

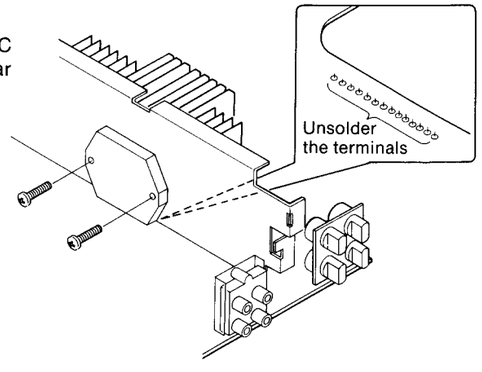


Ref. No. 4 — How to remove the power IC

Procedure 1 ➧ 2 ➧ 3 ➧ 4

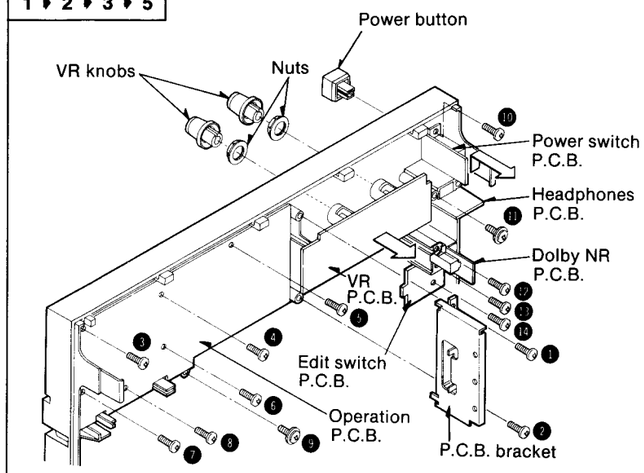
1. Unsolder the terminals of the power IC.
2. Remove the 2 screws.

Caution: When replacing the power IC, apply IC silicone compound (SZZ0L15) to the rear side of the power IC.



Ref. No. 5 — How to remove the operation, VR, power switch, headphones, Dolby NR and edit switch P.C.B.

Procedure 1 ➧ 2 ➧ 3 ➧ 5



- **How to remove the P.C.B. bracket**
1. Remove the 2 screws (❶, ❷).

- **How to remove the operation P.C.B.**
1. Remove the P.C.B. bracket.
2. Remove the 7 screws (❸ ~ ❾).

- **How to remove the VR P.C.B.**
1. Pull off the 2 VR knobs.
2. Remove the P.C.B. bracket.
3. Remove the 2 nuts.

- **How to remove the power switch P.C.B.**
1. Remove the power button.
2. Remove the screw ❿.

- **How to remove the headphones P.C.B.**
1. Remove the screw ⓫.

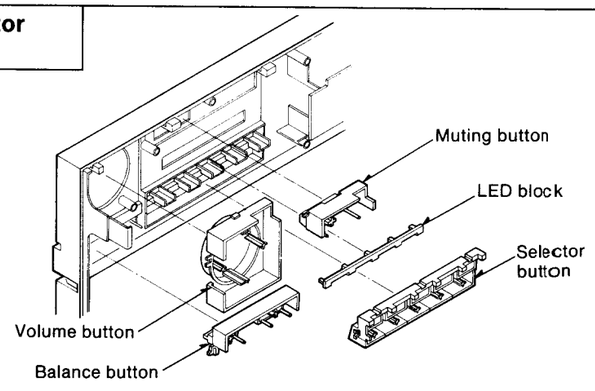
- **How to remove the Dolby NR P.C.B.**
1. Remove the 2 screws (⓬, ⓭).

- **How to remove the edit switch P.C.B.**
1. Remove the screw ⓮.

Ref. No. 6 — How to remove the selector buttons

Procedure 1 ➧ 2 ➧ 3 ➧ 5 ➧ 6

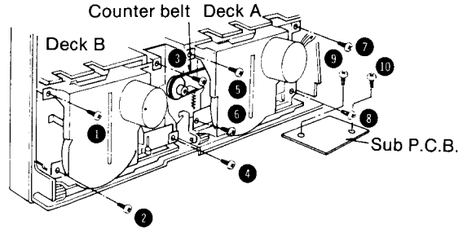
1. Pull off each button from the front panal.



Ref. No. 7 — How to remove the mechanism unit and sub P.C.B.

Procedure 1 ➧ 2 ➧ 3 ➧ 7

- **How to remove the mechanism unit**
1. Push the eject button.
2. Remove the 4 screws (❶ ~ ❹) of deck B.
3. Remove the counter belt of deck A and remove the 4 screws (❺ ~ ❽).

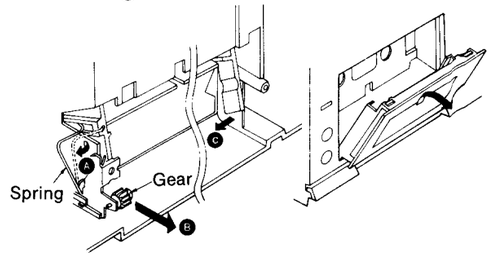


- **How to remove the sub P.C.B.**
1. Remove the 2 screws (❾, ❿).

Ref. No. 8 — How to remove the cassette lid

Procedure 1 ➧ 2 ➧ 3 ➧ 7 ➧ 8

1. Remove the spring in the direction of the arrow Ⓐ and dumper gear assembly in the direction of the arrow Ⓑ with radio pliers or the like.
2. Draw out the cassette holder lid in the direction of the arrow Ⓒ.



■ MEASUREMENTS AND ADJUSTMENTS

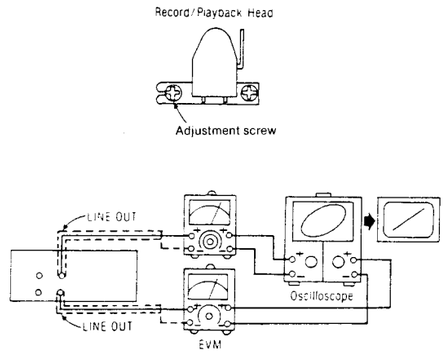
Measurement Condition
- Input selector: TAPE
- Noise reduction select switch: Off
- Make sure heads are clean.
- Make sure capstan and pressure roller are clean.
- Judgeable room temperature 20 ± 5°C (68 ± 9°F)

Measuring instruments
- EVM (electronic voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator
- DC voltmeter

Test tape
- Head azimuth adjustment (8 kHz, −20 dB): QZZCFM
- Tape speed adjustment (3 kHz, −10 dB): QZZCWAT
- Playback frequency response (315 Hz, 12.5 kHz, 10 kHz, 8 kHz, 4 kHz, 1 kHz, 250 kHz, 125 kHz, 63 kHz, −20 dB): QZZCFM
- Playback gain adjustment (315 Hz, 0 dB): QZZCFM
- Overall frequency response, Overall gain adjustment
  Normal reference blank tape: QZZCRA
  CrO_2 reference blank tape: QZZCRX
  Metal reference blank tape: QZZCRZ

HEAD AZIMUTH ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Play back the azimuth adjusted part (8 kHz, −20 dB) of the test tape (QZZCFM) and regulate the angle adjusting screw so that the outputs of L-CH and R-CH are maximized. (When the adjusting positions are different for L-CH and R-CH, find a position where the outputs of L-CH and R-CH are balanced, and then make the adjustment.)
3. At the same time, obtain a Lissajous waveform and eliminate phase deflection.
4. After adjustment, lock the tape guide height and angle adjustment screws.

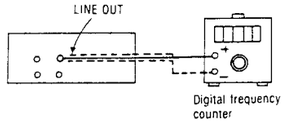


TAPE SPEED ADJUSTMENT (DECK A, B)

High speed (DECK A)
1. Test equipment connection is shown in figure.
2. Connect TP475 and TP476 with a lead wire.
3. Set the editing mode selector to "**High**" position.
4. Play back the middle part of the test tape (QZZCWAT).
5. Adjust **VR475** so that the output is within the standard.

Normal speed
6. Disconnect the lead wire between TP475 and TP476.
7. Set the editing mode selector to "**Normal**" position.
8. Adjust **VR477** so that the output is within the standard.

Standard value:	**3000 ± 20 Hz (Normal)** **6000 ± 40 Hz (High)**



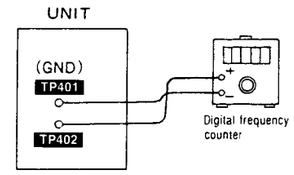
High speed (DECK B)
1. Test equipment connection is shown in figure.
2. Set the editing mode selector to "**High**" position.
3. Play back the middle part of the test tape (QZZCWAT).
4. Adjust **VR476** so that the outpuyt is within the standard.

Normal speed
5. Set the editing mode selector to "**Normal**" position.
6. Adjust **VR478** so that the output is within the standard.

Standard value:	**3000 ± 20 Hz (Normal)** **6000 ± 40 Hz (High)**

BIAS OSCILLATION ADJUSTMENT (DECK A)

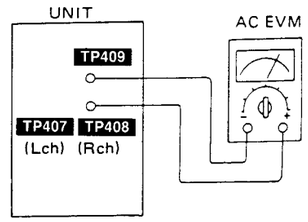
1. Test equipment connection is shown in figure.
2. Set the beat proof switch to "**A**" position.
3. Insert a metal tape and set the cassette deck to **REC** mode.
4. Adjust **L431** for **95~105 kHz** on frequency counter reading.



PLAYBACK GAIN ADJUSTMENT (DECK A,B)

1. Test equipment connection is shown in figure.
2. Play back the playback gain adjusted part (315 Hz, 0 dB) of the test tape (QZZACFM).
3. Adjust Deck B = VR301 (L-CH) (VR302 [R-CH]) and Deck A = VR303 (L-CH) (VR304 [R-CH]) so that the output is within the standard.

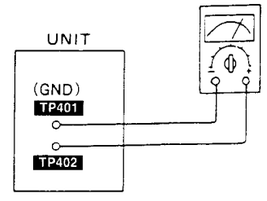
Standard value: 410 ± 10 mV



ERASE CURRENT ADJUSTMENT (DECK A)

1. Test equipment connection is shown in figure.
2. Insert a metal tape.
3. Press the record and pause buttons.
4. Adjust VR433 so that the output between **TP402** and **TP401** is within the standard.

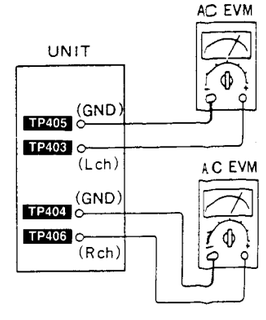
Standard value:	Metal tape	145 ± 5 mV
	Normal tape	More than 65 mV
	CrO_2 tape	More than 90 mV



RECORDING BIAS ADJUSTMENT (DECK A)

1. Test equipment connection shown in figure.
2. Set the beat proof switch to "**A**" position.
3. Insert the normal tape.
4. Press the record and pause buttons.
   Minimize the input level control and adjust **VR431**, **VR432** so that the output between **TP405** (L-CH) (**TP406** [R-CH]) and **TP403** (L-CH) (**TP404** [R-CH]) is within the standard.

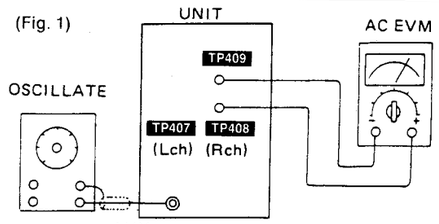
Standard value:	Normal tape	4.6 ± 0.1 mV
	CrO_2 tape	5.5 ~ 7.5 mV
	Metal tape	8.0 ~ 10.0 mV



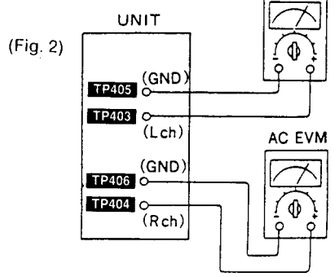
RECORDING CURRENT ADJUSTMENT (DECK A)

1. Test equipment connection is shown in figure. (Fig. 1)
2. Set the unit to **TAPE** position and the cassette deck into **STOP** mode.
3. Short circuit **TP407** and **TP408**.
4. Set the cassette deck to **REC** mode.
5. Supply AF oscillator signal (1 kHz) into **AUX** terminal and adjust the input level to get **410 ± 10 mV** on AC electronic voltmeter (AC EVM).
6. Test equipment connection is shown in figure. (Fig. 2)
7. Set the cassette deck to **REC** mode. (QZZCRA)
8. Adjust **VR305** (L-CH) and **VR306** (R-CH) for **0.38 ± 0.01 mV** on AC electronic voltmeter (AC EVM).

(Fig. 1)

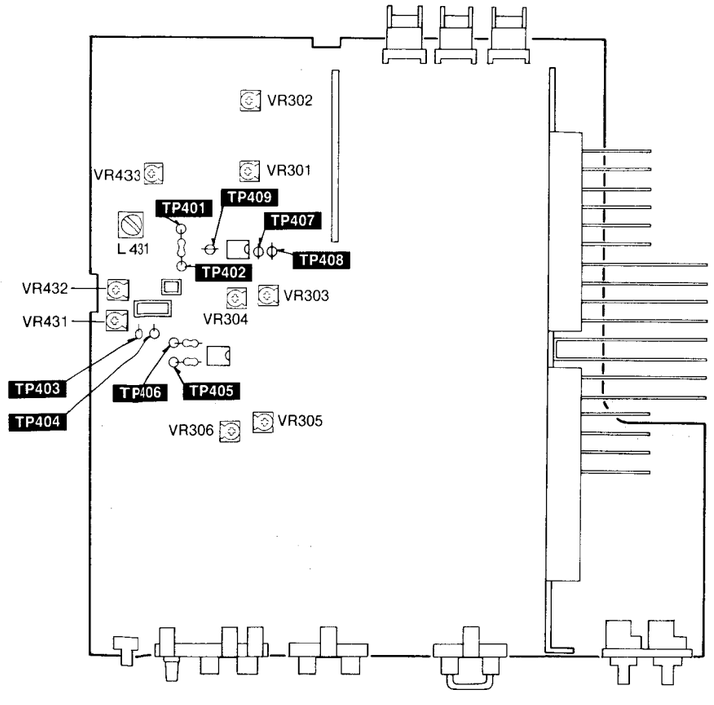


(Fig. 2)

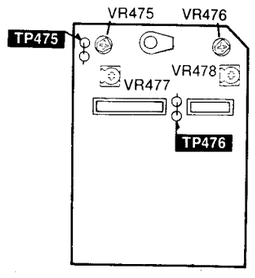


• Adjustment Points

• Main P.C.B.



• Sub P.C.B.



■ TERMINAL FUNCTION OF LSI

• M50720-408SP (Micro-computer)

Pin No.	Mark	I/O	Function
1	S1	O	Key scan output
2	S2	O	Key scan output
3	REM	I	Remote control data input
4	OSC1	O	Clock oscillation output
5	OSC2	I	Clock oscillation input
6	ST	I	Program start input (hot start at "H")
7	RES	I	Reset signal input (reset at "L")
8	VDD	I	Power supply (connected to +5V)
9	NC	---	Not connected
10	REM	I	Remote control data input
11	NC	---	Not connected
12	DATA	O	Selector and volume control
13	CLK	O	Selector and volume control
14	STB	O	Selector and volume control
15	TAPE2	O	Tape 2 LED display
16	1	O	Volume level LED 1 display
17	2	O	Volume level LED 2 display
18	3	O	Volume level LED 3 display
19	4	O	Volume level LED 4 display
20	---	I	GND terminal
21	---	I	GND terminal
22	5	O	Volume level LED 5 display

Pin No.	Mark	I/O	Function
23	6	O	Volume level LED 6 display
24	7	O	Volume level LED 7 display
25	S.BASS	O	Super bass LED display and super bass control
26	PH	O	Phono LED display
27	TU	O	Tuner LED display
28	CD	O	CD/aux LED display
29	TAPE1	O	Tape 1 LED display
30	CS2	O	Aux 2 LED display
31	MUTE	I	Muting control
32	PWR	I	Power detection (power down mode at "L")
33	STOP	O	Turntable stop control
34	ST	O	Turntable start control
35	REC	I	Deck on-recording signal input
36	PLAY	I	Deck control signal input
37	DECK	O	Deck control signal output
38	K0	I	Key scan input
39	K1	I	Key scan input
40	K2	I	Key scan input
41	K3	I	Key scan input
42	S0	O	Key scan output

• TC9177P (Volume Control)

Pin No.	Mark	I/O	Function
1	VSS	I	Power supply (connected to -B)
2	---	I	Loudness terminal (not used)
3	---	O	Loudness terminal (not used)
4	OUT1	O	10 dB attenuator output
5	IN1	I	10 dB attenuator input
6	GND	I	GND terminal
7	IN2	I	2 dB attenuator input
8	OUT2	O	2 dB attenuator output
9	GND	I	GND terminal
10	CK	I	Clock input
11	DATA	I	Attenuation/channel select data input

Pin No.	Mark	I/O	Function
12	ST	I	Strobe input (attenuation/channel select data input
13	OTT2	O	2 dB attenuator output
14	IN2	I	2 dB attenuator input
15	GND	I	GND terminal
16	IN1	I	10 dB attenuator input
17	OUT1	O	10 dB attenuator output
18	---	O	Loudness terminal (not used)
19	---	I	Loudness terminal (not used)
20	VDD	I	Power supply (connecyed to + B)

■ RESISTORS AND CAPACITORS

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.

Numbering System of Resistor

Example

ERD	25	F	J	102
Type	Wattage	Shape	Tolerance	Value
ERX	2	AN	J	471
Type	Wattage	Shape	Tolerance	Value 47x10¹ (ohm)

Numbering System of Capacitor

Example

ECKD	1H	102	Z	F
Type	Voltage	Value	Tolerance	Peculiarity
ECEA	50	M		330
Type	Voltage	Peculiarity		Value (33x10° microfarad)

Resistor Type	Wattage	Tolerance
ERD : Carbon	10 : 1/8W	J : ±5%
ERG : Metal Oxide	12 : 1/2W	F : ±1%
ERX : Metal Film	25 : 1/4W	G : ±2%
ERQ : Fuse Type Metal	1A : 1W	K : ±10%
ERD□ L : Carbon (chip)	18 : 1/8W	
ERD□ K : Metal Film (chip)	S2 : 1/4W	
ERC : Solid	S1 : 1/2W	
	2F : 1/4W	
	50 : 1/2W	
	2A : 2W	

Capacitor Type	Voltage	Tolerance
ECE : Electrolytic	0J : 6.3V	C : ±0.25pF
ECCD : Ceramic	1A : 10V	J : ±5%
ECKD : Ceramic	1C : 16V	K : ±10%
ECQM : Polyester	1E : 25V	Z : +80% −20%
	1H : 50V	
ECQP : Polyproylene	1V : 35V	P : +100% −0%
	50 : 50V	
ECG : Ceramic	05 : 50V	M : ±20%
ECEA□□□N: Non Polar Electrolytic	2H : 500V	
	2A : 100V	D : ±0.5pF
QCU□ : Ceramic (Chip Type)	1 : 100V	G : ±2%
ECUX : Ceramic (Chip Type)	KC: 400V AC	
ECF : Semiconductor	KC: 125VAC (UL)	
	1J : 63V	
EECW : Liquid electrolyte double layer capcitor		

Ref. No.	Part No.	Part Code
RESISTORS		
R81, R82	ERDS2TJ332	001 152 2357 1
R83, R84	ERDS2TJ272	001 152 2354 4
R85, R86	ERDS2TJ473	001 152 2363 3
R87, R88	ERDS2TJ561	001 152 2364 2
R89, R90	ERDS2TJ224	001 152 2433 6
R91, R92	ERDS2TJ204	001 152 3002 1
R301, R302	ERDS2TJ100	001 152 2420 1
R303, R304	ERDS2TJ224	001 152 2433 6
R305, R306	ERDS2TJ274	001 152 2437 2
R307, R308	ERDS2TJ103	001 152 2347 3
R309, R310	ERDS2TJ121	001 152 2349 1
R311, R312	ERDS2TJ394	001 152 2441 6
R313, R314	ERDS2TJ163	001 152 2763 1
R315, R316	ERDS2TJ392	001 152 2439 0
R317, R318	ERDS2TJ103	001 152 2347 3
R319, R320	ERDS2TJ224	001 152 2433 6
R321, R322	ERDS2TJ472	001 152 2362 4
R323, R324	ERDS2TJ224	001 152 2433 6
R325, R326	ERDS2TJ272	001 152 2354 4
R327, R328	ERDS2TJ103	001 152 2347 3
R331, R332	ERDS2TJ103	001 152 2347 3
R333, R334	ERDS2TJ103	001 152 2347 3
R335	ERDS2TJ561	001 152 2364 2
R337, R338	ERDS2TJ472	001 152 2362 4
R339, R340	ERDS2TJ102	001 152 2346 4
R341, R342	ERD25FJ100	001 152 0213 4
R343, R344	ERD25FJ101	001 152 0214 3
R345, R346	ERDS2TJ224	001 152 2433 6
R347, R348	ERDS2TJ121	001 152 2349 1
R349, R350	ERDS2TJ394	001 152 2441 6
R351, R352	ERDS2TJ163	001 152 2763 1
R353, R354	ERDS2TJ392	001 152 2439 0
R355, R356	ERDS2TJ472	001 152 2362 4
R357, R358	ERDS2TJ224	001 152 2433 6
R359, R360	ERDS2TJ103	001 152 2347 3
R361, R362	ERDS2TJ152	001 152 2350 8
R363, R364	ERDS2TJ224	001 152 2433 6
R365, R366	ERDS2TJ223	001 152 2432 7
R367, R368	ERDS2TJ272	001 152 2354 4
R369, R370	ERDS2TJ102	001 152 2346 4
R371, R372	ERDS2TJ102	001 152 2346 4
R373, R374	ERDS2TJ103	001 152 2347 3
R375, R376	ERDS2TJ822	001 152 2455 0
R377, R378	ERDS2TJ272	001 152 2354 4
R379, R380	ERDS2TJ102	001 152 2346 4
R381, R382	ERDS2TJ122	001 152 2423 8
R383, R384	ERDS2TJ822	001 152 2455 0
R385, R386	ERDS2TJ123	001 152 2424 7
R387, R388	ERDS2TJ273	001 152 2436 3
R389, R390	ERDS2TJ101	001 152 2421 0
R391, R392	ERDS2TJ102	001 152 2346 4
R393, R394	ERDS2TJ392	001 152 2439 0
R395, R396	ERDS2TJ392	001 152 2439 0
R397, R398	ERDS2TJ103	001 152 2347 3
R399, R400	ERDS2TJ103	001 152 2347 3
R401, R402	ERDS2TJ103	001 152 2347 3
R403, R404	ERDS2TJ103	001 152 2347 3
R405	ERDS2TJ471	001 152 2361 5
R406	ERDS2TJ103	001 152 2347 3
R407, R408	ERDS2TJ392	001 152 2439 0
R409	ERDS2TJ223	001 152 2432 7
R410	ERDS2TJ332	001 152 2357 1
R411, R412	ERDS2TJ472	001 152 2362 4
R413, R414	ERDS2TJ224	001 152 2433 6
R415, R416	ERDS2TJ103	001 152 2347 3
R417, R418	ERDS2TJ472	001 152 2362 4
R420	ERDS2TJ683	001 152 2450 5
R421	ERDS2TJ224	001 152 2433 6
R423, R424	ERDS2TJ222	001 152 2353 5
R425, R426	ERDS2TJ473	001 152 2363 3
R427, R428	ERDS2TJ103	001 152 2347 3
R431	ERD25FJ1R0	001 152 0208 1
R432	ERDS2TJ471	001 152 2361 5
R433	ERDS2TJ391	001 152 2360 6
R434	ERDS2TJ681	001 152 2449 8
R435, R436	ERDS2TJ102	001 152 2346 4
R437, R438	ERDS2TJ4R7	001 152 2826 3
R439, R440	ERDS2TJ183	001 152 2429 2
R441	ERD2FCG100	001 152 0185 1
R442	ERDS2TJ331	001 152 2356 2
R443	ERDS2TJ471	001 152 2361 5
R444	ERDS2TJ682	001 152 2365 1
R445	ERD25FJ181	001 152 0247 4
R446	ERDS2TJ103	001 152 2347 3
R447	ERDS2TJ562	001 152 2445 2
R448, R449	ERDS2TJ103	001 152 2347 3
R450	ERDS2TJ222	001 152 2353 5
R451	ERDS2TJ104	001 152 2348 2
R452	ERDS2TJ102	001 152 2346 4
R453	ERDS2TJ223	001 152 2432 7
R454	ERDS2TJ103	001 152 2347 3
R457	ERDS2TJ332	001 152 2357 1
R458	ERDS2TJ103	001 152 2347 3
R459	ERDS2TJ222	001 152 2353 5
R460	ERDS2TJ102	001 152 2346 4
R461, R462	ERDS2TJ103	001 152 2347 3
R463, R464	ERDS2TJ332	001 152 2357 1
R465	ERDS2TJ104	001 152 2348 2
R466	ERDS2TJ473	001 152 2363 3
R468	ERDS2TJ222	001 152 2353 5
R469	ERDS2TJ221	001 152 2431 8
R470	ERD25FJ222	001 152 0261 6
R473	ERDS2TJ103	001 152 2347 3
R474	ERDS2TJ472	001 152 2362 4
R475, R476	ERDS2TJ332	001 152 2357 1
R477	ERDS2TJ103	001 152 2347 3
R478, R479	ERDS2TJ183	001 152 2429 2
R480	ERDS2TJ103	001 152 2347 3
R481	ERDS2TJ222	001 152 2353 5
R482, R483	ERDS2TJ105	001 152 2422 9
R484	ERDS2TJ101	001 152 2421 0
R485	ERDS2TJ103	001 152 2347 3
R486	ERDS2TJ473	001 152 2363 3
R487	ERDS2TJ332	001 152 2357 1
R488	ERDS2TJ103	001 152 2347 3
R489, R490	ERDS2TJ392	001 152 2439 0
R491	ERDS2TJ223	001 152 2432 7
R492	ERDS2TJ102	001 152 2346 4
R493	ERDS2TJ223	001 152 2432 7
R494	ERDS2TJ103	001 152 2347 3
R495, R496	ERDS2TJ223	001 152 2432 7
R497	ERDS2TJ103	001 152 2347 3
R498	ERDS2TJ183	001 152 2429 2
R499	ERDS2TJ223	001 152 2432 7
R501, R502	ERDS2TJ391	001 152 2360 6
R503, R504	ERDS2TJ224	001 152 2433 6
R505, R506	ERDS2TJ563	001 152 2446 1

Ref. No.	Part No.	Part Code
R507, R508	ERDS2TJ181	001 152 2428 3
R509, R510	ERDS2TJ680	001 152 2448 9
R511, R512	ERDS2TJ154	001 152 2427 4
R513, R514	ERDS2TJ123	001 152 2424 7
R515, R516	ERDS2TJ563	001 152 2446 1
R517, R518	ERDS2TJ102	001 152 2346 4
R521, R522	ERDS2TJ222	001 152 2353 5
R523, R524	ERDS2TJ332	001 152 2357 1
R525	ERD2FCG560	001 152 2478 3
R526	ERDS2TJ560	001 152 2597 7
R527, R528	ERDS2TJ563	001 152 2446 1
R529	ERDS2TJ563	001 152 2446 1
R530, R531	ERDS2TJ103	001 152 2347 3
R532	ERDS2TJ103	001 152 2347 3
R533, R534	ERDS2TJ224	001 152 2433 6
R535, R536	ERDS2TJ102	001 152 2346 4
R537, R538	ERDS2TJ332	001 152 2357 1
R539	ERDS2TJ391	001 152 2360 6
R540	ERDS2TJ471	001 152 2361 5
R541, R542	ERDS2TJ102	001 152 2346 4
R543, R544	ERDS2TJ224	001 152 2433 6
R545, R546	ERDS2TJ224	001 152 2433 6
R547, R548	ERDS2TJ473	001 152 2363 3
R549, R550	ERDS2TJ391	001 152 2360 6
R551, R552	ERDS2TJ682	001 152 2365 1
R553, R554	ERDS2TJ223	001 152 2432 7
R555, R556	ERDS2TJ392	001 152 2439 0
R557, R558	ERDS2TJ223	001 152 2432 7
R559, R560	ERDS2TJ332	001 152 2357 1
R561, R562	ERDS2TJ102	001 152 2346 4
R563, R564	ERDS2TJ223	001 152 2432 7
R565	ERDS2TJ102	001 152 2346 4
R566	ERDS2TJ224	001 152 2433 6
R571	ERDS2TJ102	001 152 2346 4
R572	ERDS2TJ471	001 152 2361 5
R577, R578	ERDS2TJ224	001 152 2433 6
R579, R580	ERDS2TJ153	001 152 2351 7
R581, R582	ERDS2TJ823	001 152 2456 9
R583, R584	ERDS2TJ103	001 152 2347 3
R585, R586	ERDS2TJ562	001 152 2445 2
R587, R588	ERDS2TJ102	001 152 2346 4
R589, R590	ERDS2TJ102	001 152 2346 4
R591, R592	ERDS2TJ223	001 152 2432 7
R603, R604	ERDS2TJ102	001 152 2346 4
R605, R606	ERDS2TJ393	001 152 2440 7
R607, R608	ERDS2TJ272	001 152 2354 4
R609, R610	ERDS2TJ393	001 152 2440 7
R611, R612	ERDS1FJ100	001 152 2612 5
R613	ERDS2TJ154	001 152 2427 4
R614, R615	ERDS1FJ221	001 152 2513 7
R616	ERDS1FJ331	001 152 2514 6
R617	ERDS2TJ103	001 152 2347 3
R618	ERDS2TJ154	001 152 2427 4
R701	ERD2FCG101	001 152 0186 0
R702	ERDS2TJ332	001 152 2357 1
R703	ERDS2TJ102	001 152 2346 4
R704	ERDS1FJ1R0	001 152 2754 2
R706, R707	ERDS2TJ102	001 152 2346 4
R808, R809	ERDS2TJ221	001 152 2431 8
R810, R811	ERDS2TJ221	001 152 2431 8
R812	ERDS2TJ221	001 152 2431 8
R813	ERDS2TJ392	001 152 2439 0
R814	ERDS2TJ102	001 152 2346 4
R816	ERDS2TJ472	001 152 2362 4
R820	ERDS2TJ122	001 152 2423 8
R821	ERDS2TJ103	001 152 2347 3
R822	ERDS2TJ472	001 152 2362 4
R829	ERDS2TJ104	001 152 2348 2
R830	ERDS2TJ105	001 152 2422 9
R831, R832	ERDS2TJ103	001 152 2347 3
R833	ERDS2TJ223	001 152 2432 7
R834	ERDS2TJ823	001 152 2456 9
R835	ERDS2TJ273	001 152 2436 3
CAPACITORS		
C81, C82	ECEA1EU4R7	001 120 2840 3
C83	ECBS1H821KBY	001 103 7587 4
C84	ECBS1H821KBY	001 103 7587 4
C85, C86	ECEA1CU100	001 120 2905 3
C87, C88	ECEA1CU100	001 120 2905 3
C89, C90	ECQB1H333JZ	001 106 4846 1
C91, C92	ECQB1H103JZ	001 106 3225 8
C93, C94	ECQB1H472JZ	001 106 3380 8
C95, C96	ECEA1CU100	001 120 2905 3
C97, C98	ECFD1V473KD	001 108 0256 3
C99, C100	ECEA1HS0R1	001 120 3250 5
C101, C102	ECAG25ER33	001 120 1103 3
C103	ECEA1AU221	001 120 3131 1
C301, C302	ECKD1H121KB	001 103 1455 9
C303, C304	ECKD1H331KB	001 103 1523 4
C305, C306	ECEA0JU470	001 120 3125 9
C307, C308	ECKD1H331KB	001 103 1523 4
C309, C310	ECQB1H822JZ	001 106 3383 5
C311, C312	ECEA1HU010	001 120 2842 1
C313, C314	ECQB1H153JZ	001 106 2817 4
C315, C316	ECQB1H153JZ	001 106 2817 4
C317, C318	ECKD1H561KB	001 103 1576 1
C319, C320	ECEA0JU470	001 120 3125 9
C321, C322	ECKD1H331KB	001 103 1523 4
C323, C324	ECQB1H822JZ	001 106 3383 5
C325, C326	ECEA1HU010	001 120 2842 1
C327, C328	ECQB1H153JZ	001 106 2817 4
C329, C330	ECCD1H020CC	001 103 0221 9
C331, C332	ECEA1HU010	001 120 2842 1
C333, C334	ECEA1HU010	001 120 2842 1
C335, C336	ECKD1H681K	001 103 1580 5
C337, C338	ECKD1H101KB	001 103 1412 0
C339, C340	ECFTD333KXL	001 108 0360 4
C341, C342	ECFTD822KXL	001 108 0347 1
C343, C344	ECFTD183KXL	001 108 0358 8
C345, C346	ECFTD103KXL	001 108 0341 7
C347, C348	ECEA1HU010	001 120 2842 1
C349, C350	ECEA1HU010	001 120 2842 1
C351, C352	ECEA1HU010	001 120 2842 1
C353	ECEA1HU010	001 120 2842 1
C355, C356	ECCD1H820K	001 103 0703 6
C357, C358	ECQV1H104JZ	001 106 2571 7
C431	ECQP1822FZ	001 106 1116 0
C432	ECQB1H153JZ	001 106 2817 4
C433	ECQP1182JZ	001 106 2082 9
C434	ECQP1122JZ	001 106 1072 5
C435, C436	ECQV1H104JZ	001 106 2571 7
C437, C438	ECQB1H332JZ	001 106 3316 6
C439	ECQB1H682JZ3	001 106 4303 7
C440	ECEA1HU010	001 120 2842 1
C441	ECEA1AU470	001 120 2832 3
C442	ECEA1HUR47	001 120 3249 8
C443	ECEA1HU4R7	001 120 0387 1
C445, C446	ECKR1H103ZF5	
C447, C448	ECKR1H103ZF5	
C449, C450	ECKR1H103ZF5	
C451	ECEA1AU470	001 120 2832 3
C452	ECEA1HU4R7	001 120 0387 1
C453, C454	ECKR1H103ZF5	
C455, C456	ECEA1CU220	001 120 2906 2
C457	ECEA1CU101	001 120 2926 8
C459, C460	ECKR1H103ZF5	
C461	ECEA1AU470	001 120 2832 3
C475	ECEA1CU331	001 120 3200 5
C477	ECEA1CU470	001 120 2835 0
C501, C502	ECEA1HU3R3	001 120 3254 1
C503, C504	ECKD1H101KB	001 103 1412 0
C505, C506	ECKD1H471KB	001 103 1551 0
C507, C508	ECEA0JU330	001 120 3162 4
C509, C510	ECFTD223KXL	001 108 0342 6
C511, C512	ECFTD682KXL	001 108 0363 1
C513, C514	ECEA1HU010	001 120 2842 1
C515, C516	ECKR1H103ZF5	
C517, C518	ECKR1H103ZF5	
C519	ECCD1H470K	001 103 0627 1
C521, C522	ECEA1HU010	001 120 2842 1
C523, C524	ECFTD473KXL	001 108 0361 3
C525, C526	ECEA1CU220	001 120 2906 2
C527, C528	ECKR1H103ZF5	
C529, C530	ECKD1H101KB	001 103 1412 0
C531, C532	ECKR1H103ZF5	
C533, C534	ECEA1HU3R3	001 120 3254 1
C535, C536	ECKD1H101KB	001 103 1412 0
C537, C538	ECKD1H101KB	001 103 1412 0
C539, C540	ECFTD393KXL	001 108 0817 2
C541, C542	ECEA1HUR47	001 120 3249 8
C543, C544	ECEA1HU010	001 120 2842 1
C545, C546	ECEA1HU010	001 120 2842 1
C547, C548	ECFTD183KXL	001 108 0358 8
C549, C550	ECFTD104KXL	001 108 0793 3
C551, C552	ECFTD332KXL	001 108 0344 4
C553, C554	ECFTD333KXL	001 108 0360 4
C555	ECFTD104KXL	001 108 0793 3
C556	ECEA1AU470	001 120 2832 3
C557	ECFTD122KXL	001 108 0744 2
C559	ECKD1H103PF	001 103 1449 7
C560	ECKD1H223PF	001 103 1510 9
C561	ECKD1H103PF	001 103 1449 7
C601, C602	ECEA1HU3R3	001 120 3254 1
C603, C604	ECKD1H821KB	001 103 1596 7
C605, C606	ECKD1H102KB	001 103 1414 8
C607, C608	ECEA1CU100	001 120 2905 3
C609, C610	ECCD1H120KC	001 103 0370 7
C611, C612	ECFTD473KXL	001 108 0361 3
C613, C614	ECFTD473KXL	001 108 0361 3
C615	ECEA1HS330	001 120 0383 5
C616	ECFTD473KXL	001 108 0361 3
C700	ECKWNS103ZVS	001 103 9317 6
C701	ECQM1104KZW	001 106 2113 9
C702, C703	ECETS40V332U	001 120 6354 6
C705, C706	ECEA1CU101	001 120 2926 8
C707, C708	ECKR1H103ZF5	
C709, C710	ECKR1H103ZF5	
C711	ECEA25V2200	001 120 3126 8
C712	ECEA1CU101	001 120 2926 8
C713	ECEA1CU470	001 120 2835 0
C715	ECKD1H223PF	001 103 1510 9
C803	ECEA1HK0R1	001 120 0340 6
C804	ECEA0JK101	001 120 0136 8
C805	ECKR1H103ZF5	
C806	ECEA1HK010	001 120 0341 5
C807, C808	ECKD1H101KB	001 103 1412 0
C809	ECEA1HU010	001 120 2842 1
C810	EECF5R5U473	001 120 3738 6

■ REPLACEMENT PARTS LIST

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

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Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Code	Description
INTEGRATED CIRCUITS			
IC61	TA7770N	001 061 4022 9	I.C., DOLBY
IC301, IC302	AN6558F	001 060 4009 1	I.C., P. B AMP
IC303	AN6558F	001 060 4009 1	I.C., P. B AMP
IC304	AN6552F	001 060 0274 2	I.C., OPERATION AMP.
IC306	MN6634	001 061 0884 7	I.C., NR SELECTOR
IC307, IC501	AN6552F	001 060 0274 2	I.C., OPERATION AMP.
IC502	TC9163N	001 061 0203 2	I.C., INPUT SELECTOR
IC503	TC9177P	001 061 0839 2	I.C., VOLUME CONTROL
IC504, IC505	AN6558F	001 060 4009 1	I.C., BUFFER
IC601	SVI3102A	001 061 4832 3	I.C., POWER AMP
IC701	AN7812	001 060 3756 7	I.C., REGULATOR
IC801	M50720-408SP	001 061 5760 8	I.C., MICRO COMPUTER
TRANSISTORS			
Q301, Q302	2SD1450RS	001 030 6115 0	TRANSISTOR
Q303, Q304	2SC2785F	001 030 5076 4	TRANSISTOR
Q305, Q306	2SC2785F	001 030 5076 4	TRANSISTOR
Q307, Q308	2SC2785F	001 030 5076 4	TRANSISTOR
Q309	2SC2785F	001 030 5076 4	TRANSISTOR
Q310, Q311	2SC2784PFE	001 030 6019 9	TRANSISTOR
Q312	2SC2784PFE	001 030 6019 9	TRANSISTOR
Q313, Q314	2SC2785F	001 030 5076 4	TRANSISTOR
Q315, Q316	2SC2785F	001 030 5076 4	TRANSISTOR
Q317, Q318	2SD1450RS	001 030 6115 0	TRANSISTOR
Q319, Q320	2SC2785F	001 030 5076 4	TRANSISTOR
Q321, Q322	2SC2785F	001 030 5076 4	TRANSISTOR
Q323, Q324	2SC2785F	001 030 5076 4	TRANSISTOR
Q325, Q326	2SC2785F	001 030 5076 4	TRANSISTOR
Q327, Q328	2SC2785F	001 030 5076 4	TRANSISTOR
Q331, Q332	2SD1450RS	001 030 6115 0	TRANSISTOR
Q431, Q432	2SD1512R	001 030 5015 7	TRANSISTOR
Q433, Q434	2SD592ANCQ	001 030 1752 7	TRANSISTOR
Q435	2SC1384A-R	001 030 0937 4	TRANSISTOR
Q436	2SA1175EFTA	001 030 7024 8	TRANSISTOR
Q437, Q439	2SC2785F	001 030 5076 4	TRANSISTOR
Q440, Q441	2SC2785F	001 030 5076 4	TRANSISTOR
Q442, Q443	2SC2785F	001 030 5076 4	TRANSISTOR
Q444	2SC2785F	001 030 5076 4	TRANSISTOR
Q446, Q449	2SA1175EFTA	001 030 7024 8	TRANSISTOR
Q450	DTC144A	001 030 2708 7	TRANSISTOR
Q452	2SC2785F	001 030 5076 4	TRANSISTOR
Q475	2SC1384A-R	001 030 0937 4	TRANSISTOR
Q476, Q477	2SA1175EFTA	001 030 7024 8	TRANSISTOR
Q478	2SC2785F	001 030 5076 4	TRANSISTOR
Q479	DTC124ESTP	001 030 5647 1	TRANSISTOR
Q480	2SA684-RNC	001 030 0352 3	TRANSISTOR
Q481	2SC2785F	001 030 5076 4	TRANSISTOR
Q483	DTC124ESTP	001 030 5647 1	TRANSISTOR
Q484	DTC114ESTP	001 030 5025 5	TRANSISTOR
Q502	2SA1175EFTA	001 030 7024 8	TRANSISTOR
Q503, Q504	2SC2785F	001 030 5076 4	TRANSISTOR
Q505, Q506	2SD1450RS	001 030 6115 0	TRANSISTOR
Q701	2SB941-P	001 030 2696 4	TRANSISTOR
Q702	2SC1384A-R	001 030 0937 4	TRANSISTOR
Q802	2SA1175EFTA	001 030 7024 8	TRANSISTOR
Q803, Q804	DTA114ESTP	001 030 5275 9	TRANSISTOR
DIODES			
D403, D404	MA165	001 032 0494 0	DIODE
D431, D432	MA165	001 032 0494 0	DIODE
D433	MA165	001 032 0494 0	DIODE
D434	MA4082M	001 032 4955 6	DIODE
D436, D443	MA165	001 032 0494 0	DIODE
D444, D445	MA165	001 032 0494 0	DIODE
D475, D476	MA165	001 032 0494 0	DIODE
D478, D479	MA165	001 032 0494 0	DIODE
D482, D483	MA165	001 032 0494 0	DIODE
D484	MA165	001 032 0494 0	DIODE
D485 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D501, D502	MA165	001 032 0494 0	DIODE
D503, D505	MA165	001 032 0494 0	DIODE
D701, D702 ⚠	SVDS2V20	001 032 1343 0	RECTIFIER
D703, D704 ⚠	SVDS2V20	001 032 1343 0	RECTIFIER
D706, D707 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D708, D709 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D710	MA4062-M	001 032 7211 7	DIODE
D801, D802	LN078396P	001 033 0156 0	L.E.D. ASS'Y
D803, D804	LN078396P	001 033 0156 0	L.E.D. ASS'Y
D805, D806	LN078396P	001 033 0156 0	L.E.D. ASS'Y
D807	LN078396P	001 033 0156 0	L.E.D. ASS'Y
D808, D809	SVGLB74UR3HL	001 032 7553 8	L.E.D
D810, D811	SVGLB74UR3HL	001 032 7553 8	L.E.D
D812	SVGLB74UR3HL	001 032 7553 8	L.E.D
D814, D815	MA165	001 032 0494 0	DIODE
D816, D817	MA165	001 032 0494 0	DIODE
D819	MA165	001 032 0494 0	DIODE
VARIABLE RESISTORS			
VR301, VR302	EVND4AA00B24	001 180 2244 1	V.R., 20KΩ(B)
VR303, VR304	EVND4AA00B24	001 180 2244 1	V.R., 20KΩ(B)
VR305, VR306	EVND4AA00B54	001 180 2246 9	V.R., 50KΩ(B)
VR431, VR432	EVND4AA00B25	001 180 2245 0	V.R., 200KΩ(B)
VR433	EVND4AA00B53	001 180 2319 9	V.R., 5KΩ(B)
VR475, VR476	EVN4LCA00B14	001 180 3116 4	V.R., 10KΩ(B)
VR477, VR478	EVND4AA00B14	001 180 2242 3	V.R., 10KΩ(B)
VR501, VR502	EWC2XAF25C15	001 174 9046 3	V.R., 100KΩ(C)
COILS AND TRANSFORMERS			
L301, L302	SLQX303-1K	001 211 1756 6	CHOKE COIL
L303, L304	QLB5X2722D	001 210 7152 9	COIL
L305, L306	SLQX303-1K	001 211 1756 6	CHOKE COIL
L431	SL09C9-K	001 211 0882 5	OSCILLATOR COIL
L801, L802	ELEPK220KA	001 211 4429 6	COIL
L803, L804	ELEPK101KA	001 211 0855 8	CHOKE COIL
T1 ⚠ (EK, XL)	SLTF5M14-W	001 202 9212 2	POWER TRANSFORMER
T1 ⚠ (EB)	SLTF5M15-W	001 202 9206 0	POWER TRANSFORMER
COMPONENT COMBINATIONS			
Z801	EXBF9E103J	001 230 2204 2	COMPONENT COMBINATION
Z802	EXBF8E221J	001 230 2976 5	CNMBINATION COM
Z803	EXBF4E472J	001 230 1745 2	CNMBINATION COM
OSCILLATORS			
X801	ECF0FC2004A3	001 241 1458 5	CERAMIC FILTER
FUSES			
F1 ⚠	XBA2C08TB0	002 380 1460 7	FUSES 250V.T0.8A
F2 ⚠	XBA2C10TB0	002 380 1351 1	FUSE 250V. T1A
F3 ⚠ (EK, EB)	XBA2C20TB0	002 380 1352 0	FUSE
SWITCHES			
S1 ⚠	ESB823V	003 435 3504 4	SW, POWER SW
S301, S302	SSP82-1	003 434 1015 9	SW
S303	SMQT1451	003 434 0905 8	LEAF SWITCH
S304	SMQT1615	003 434 0993 2	LEAF SWITCH
S305	SMQT1466	003 434 0907 6	LEAF SWITCH
S306	SSP82-1	003 434 1015 9	SW, A.T.S
S307	SMQT1451	003 434 0905 8	LEAF SWITCH
S308	SMQT1466	003 434 0907 6	LEAF SWITCH
S401	SSS178	003 431 3841 0	SW, DUBBING
S402	SSH1220	003 435 6008 3	SW, N.R SW
S403	SSS150	003 431 3104 6	SW, BEAT SW
S501	SSH1198	003 435 5171 7	SW, S.BASS
S801, S802	EVQQS205K	003 439 1236 3	SW, TAPE/AUX
S803, S804	EVQQS205K	003 439 1236 3	SW, CD/TUNER
S805, S806	EVQQS205K	003 439 1236 3	SW, PHONO/MUT
S807, S808	EVQQS205K	003 439 1236 3	SW, DOWN/UP
S809, S810	EVQQS205K	003 439 1236 3	SW, BALANCE

Ref. No.	Part No.	Part Code	Description
CASSETTE DECK			
104	SJHE700XE	001 270 1361 0	DUMMY HEAD (DECK B)
104	SJH94	001 270 0774 7	E HEAD (DECK A)
105	SJH92	001 270 1308 5	R/P HEAD
106	SMQT1469	016 726 0432 2	SPRING
107	RFS447Z	015 726 2437 7	SPRING
108	SMQT1468	016 630 0239 2	HEAD BASE
109	SMQT1653	016 630 1747 3	SENSING PLATE
110	SMQT1560	016 630 1674 3	HEAD PANEL
111	SMQT1622	016 726 0767 2	SPRING
112	SMQT1654	016 717 0251 6	ARM
113	SMQT1639	016 726 0776 1	SPRING
114	RFR29ZA	015 740 0302 7	ROLLER
115	RFS531ZA	015 726 2470 6	SPRING
116	SMQT1637	016 765 0054 9	TAKE UP REEL ASS'Y
117	SMQT1621	016 726 0766 3	SPRING
118	SMQT1605	016 718 3302 5	REC LEVER
119	SMQT1656	016 745 0191 3	GEAR
120	SMQT1640	016 630 1717 9	GEAR PLATE
121	RFS450Z	015 726 2440 2	SPRING
122	RFS467Z	015 727 0783 5	PACK SPRING
123	SMQT1564	016 630 1678 9	REEL BASE ASS'Y
124	SMQT1657	016 745 0192 2	FF GEAR
125	RFY549ZA	015 718 3506 3	LEVER
126	RFS453Z	015 726 2442 0	SPRING
127	SMQT1569	016 718 3278 8	LEVER
128	RFS454Z	015 726 2443 9	COIL SPRING
131	MMAUX830-KE	002 310 2624 3	MOTOR ASS'Y
131-1	SMQT1736	016 741 0096 1	MOTOR PULLEY
133	SMQT1647	016 752 0125 2	MAIN BELT
134	RF127Z	015 653 0531 2	MOTOR RUBBER
135	SMQT1645	016 650 5226 5	MOTOR BRACKET
138	SMQT1644	016 756 0082 6	FLY-WHEEL ASS'Y
139	SMQT1563	016 752 0118 1	RF BELT
140	SMQT1650	016 641 0244 4	METAL GUIDE
141	SMQT1557	016 630 1675 2	SUB CHASSIS
142	RFS530ZA	015 726 2469 9	COIL SPRING
143	SMQT1465	016 726 0434 0	SPRING
144	RFS532ZA	015 728 1316 9	SPRING
145	SMQT1655	016 717 0249 0	RF BPULLEY ARM ASS'Y
146	SMQT1555	016 718 3270 6	REW LEVER
147	RFS466Z	015 726 2449 3	SPRING
148	SMQT1548	016 630 1676 1	PUSH BUTTON ACTUATOR
149	RFS567Z	015 728 1424 6	SPRING
150	RTY427Z	016 650 5262 1	SWITCH PLATE
151	SMQT1463	016 643 0597 2	STOPPER
152	RFS459Z	015 726 2444 8	SPRING
153	RFY420Z	015 718 3445 9	PAUSE LEVER
154	SMQT1554	016 718 3271 5	PAUSE BUTTON LEVER
155	SMQT1553	016 718 3272 4	STOP BUTTON LEVER
156	SMQT1552	016 718 3273 3	FF BUTTON LEVER
157	SMQT1551	016 718 3274 2	REW BUTTON LEVER
158	SMQT1550	016 718 3275 1	PLAY BUTTON LEVER
159	SMQT1580	016 718 3279 7	LEVER, REC
160	SMQT1618	016 630 1708 0	ANGLE (DECK A)
160	SMQT1662	016 650 5428 7	SWITCH BRACKET (DECK B)
161	RFS462Z	015 728 1267 1	SPRING
162	SMQT1558	016 726 0727 0	SPRING
163	SMQT1641	016 643 0939 0	COLLER
164	SMQT1547	016 630 1679 8	MAIN BASE ASS'Y
165	SMQT1628	016 643 0940 7	P.R STOPPER
166	SMQT1661	016 650 5225 6	BRACKET
167	SMQ4922	016 726 0251 5	SPRING
168	SMQT1595	016 630 1710 6	FL PLATE
S301	SSP82-1	003 434 1015 9	SW (DECK A)
S302	SSP82-1	003 434 1015 9	SW (DECK A)
S303	SMQT1451	003 434 0905 8	LEAF SWITCH (DECK A)
S304	SMQT1615	003 434 0993 2	LEAF SWITCH (DECK A)
S305	SMQT1466	003 434 0907 6	LEAF SWITCH (DECK A)
S306	SSP82-1	003 434 1015 9	SW, A.T.S (DECK B)
S307	SMQT1451	003 434 0905 8	LEAF SWITCH (DECK B)
S308	SMQT1466	003 434 0907 6	LEAF SWITCH (DECK B)
SCREWS, WASHERS & NUTS			
N51	XTN2+4H	005 501 2158 1	SCREW
N52	XYN2D8	005 503 0922 7	SCREW
N53	XYN2DB7	005 503 0920 9	SCREW
N54	XYN2D7	005 501 0921 8	SCREW
N55	RFN142Z	005 513 3262 2	WASHER
N57	XYN2+5	005 503 0919 2	SCREW
N58	XTN2+3H	005 501 4724 5	SCREW
N59	SMQT1537	005 500 5082 7	SCREW
N60	XTB2+5G	005 501 2615 7	SCREW
N62	SMQ4918	016 643 0446 6	SCREW
N64	RFN153ZA	005 513 3274 8	WASHER
N65	SMQT1648	016 643 0962 1	WASHER
N66	XTN23+6H	005 501 3460 4	SCREW
N67	XTN2+6G	005 501 1622 2	SCREW
N68	SMQT1624	005 500 5729 1	SCREW
N69	XWA2B	005 513 1232 6	WASHER
N70	XTB2+6F	005 501 2750 1	SCREW

■ MECHANICAL PARTS LOCATION

NOTE

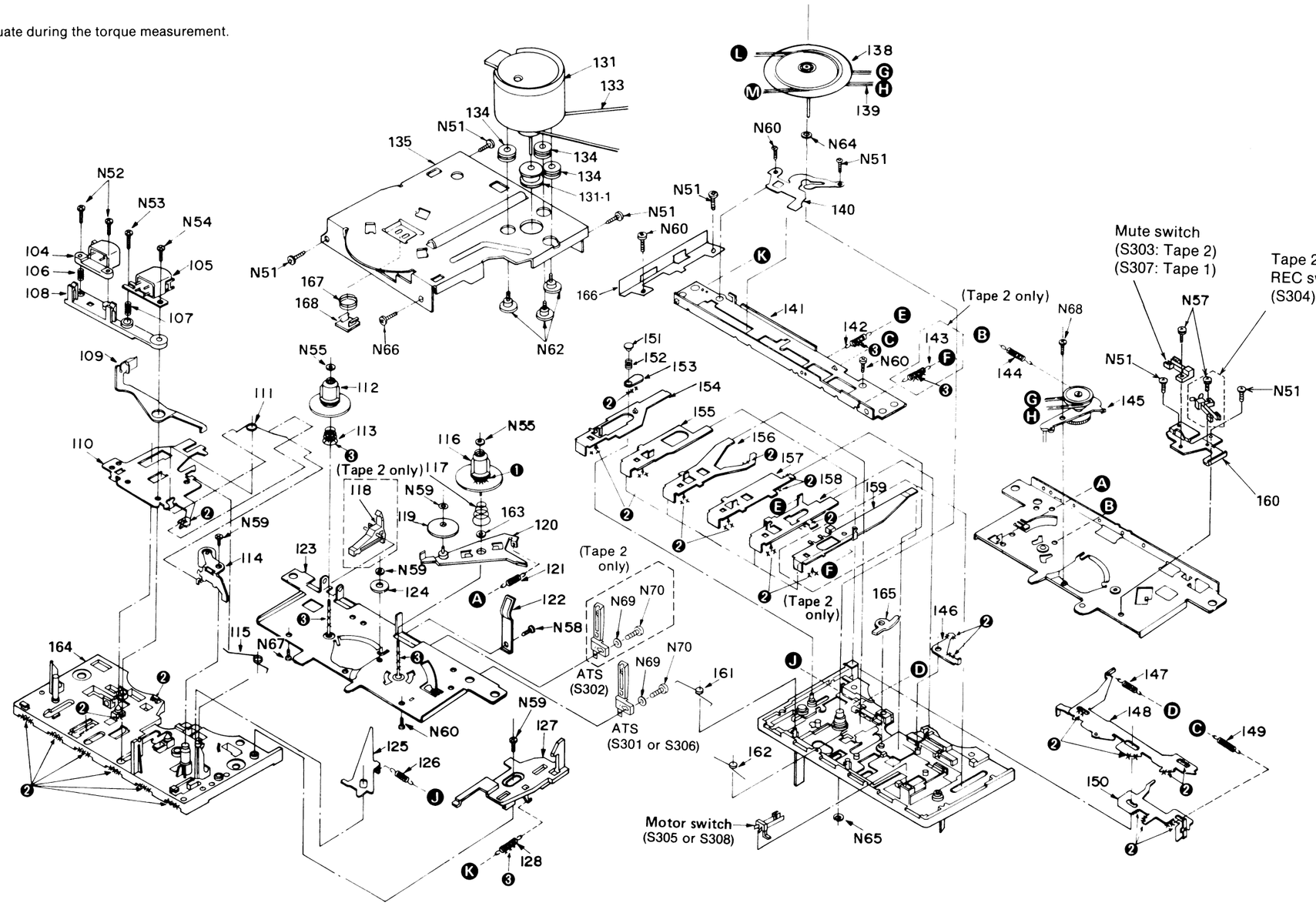
- When changing mechanism parts, apply the specified grease to the areas marked "xx" in the drawing "Mechanical Parts Location".

Ref. No.	PART NAME	PARTS NO.
❶	FLOIL G-311S	SZZOL26
❷	FLOIL G-488M	SZZOL28
❸	SILICONE OIL G-40M	SZZOL27

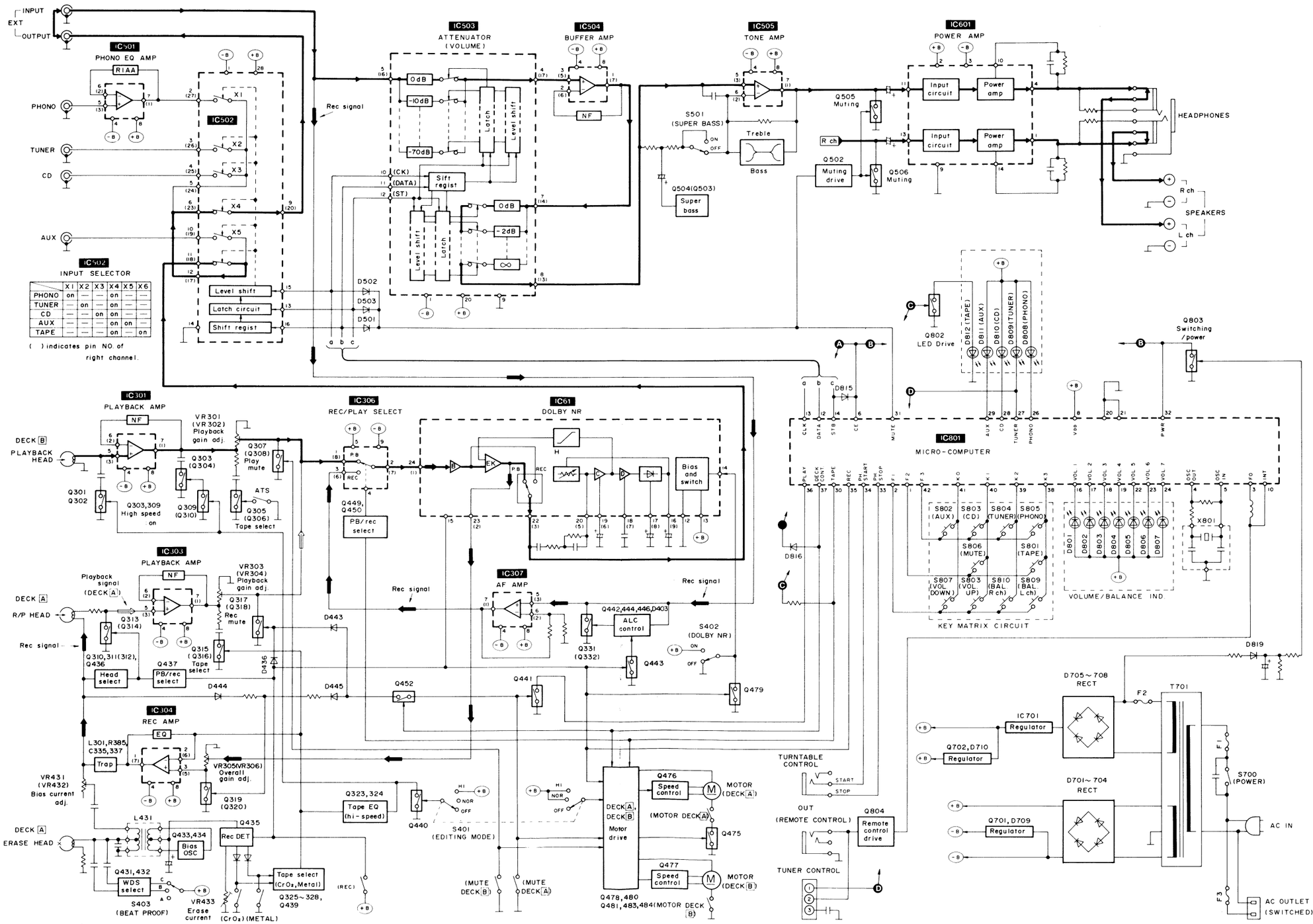
SPECIFICATIONS

NOTE: The value indicated by the torque meter may fluctuate during the torque measurement. In that case, obtain the middle of the values.

Pressure of pressure roller	350 ± 50 g
Takeup tension • Use cassette torque meter.....QZZSRKCT	35 ~ 60 g-cm
Wow and flutter: (JIS) • Use test tape .....QZZCWAT	Less than 0.2 % (WRMS)



■ BLOCK DIAGRAM



■ REPLACEMENT PARTS LIST

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

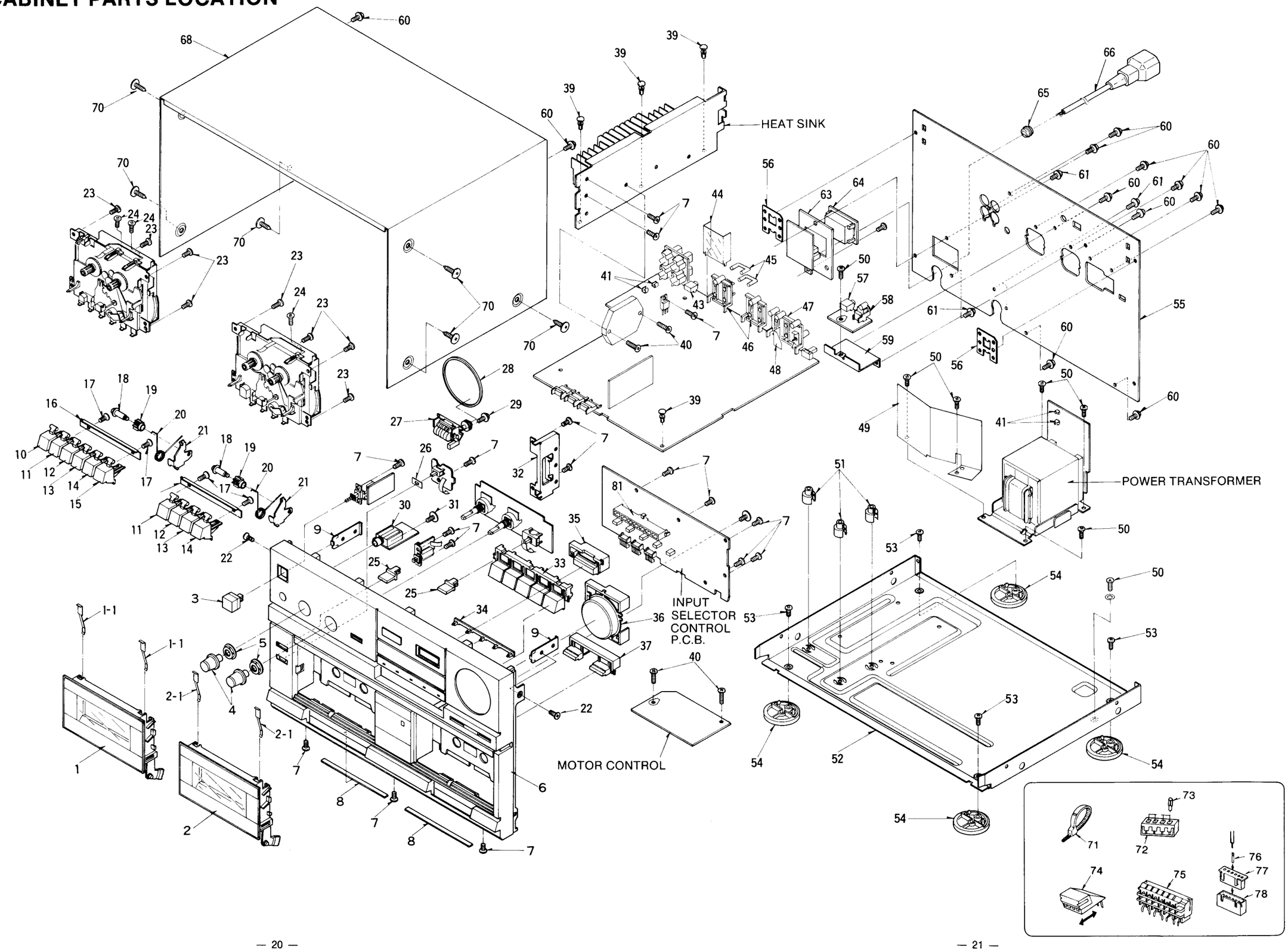
* Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Code	Description
CABINET AND CHASSIS			
1	SYEF7	016 820 0644 5	CASSETTE HOLDER(DECK A)
1-1	QBP2006A	015 727 0706 8	SPRING
2	SYEF8	016 820 0643 6	CASSETE HOLDER(DECK B)
2-1	QBP2006A	015 727 0706 8	SPRING
3	SBC666-1	016 702 6076 0	BUTTON
4	SBN1221	016 700 1974 5	KNOB
5	SNE4021	005 507 0372 5	NUT
6	SYYF4	016 840 8148 2	FRONT PANEL
7	XTB3+10J	005 501 2076 2	SCREW
8	SHGF4	016 653 1100 9	RUBBER SPACER
9	SNEF2	016 846 3960 2	ORNAMENT SCREW
10	SBCF6E	016 702 7077 5	BUTTON, REC
11	SBCF6A	016 702 7073 9	BUTTON, PLAY
12	SBCF6B	016 702 7080 0	BUTTON, REW
13	SBCF6C	016 702 7079 3	BUTTON, FF
14	SBCF6D	016 702 7078 4	BUTTON, STOP
15	SBCF6F	016 702 7076 6	BUTTON , PAUSE(DECK A)
16	SUW2995	016 650 5182 0	BRACKET
17	XTS3+10J	005 501 2755 6	SCREW
18	SNE2120	005 500 5609 8	SCREW
19	SMQ4096	016 745 0063 0	GEAR
20	SMQ60026	016 726 0969 4	SPRING
21	SMQ30030	016 650 5149 1	ANGLE
22	XTS3+8F	005 501 0710 7	SCREW
23	XTB3+10GFR	005 501 3126 5	SCREW
24	XYA2+CF8	005 503 1272 4	SCREW
25	SBC928	016 702 6969 2	KNOB
26	SHR5312	016 652 0550 6	SPACER
27	SJNF1	016 892 0130 4	TAPE COUNTER
28	SMQ20021	016 754 0064 8	ANGULAR BELT
29	XTW3+10T	005 501 0996 9	SCREW
30	SJJ63E	003 400 4329 0	JACK, HEADPHONE
31	XTWS3+8T	005 501 3311 6	SCREW
32	SUW3063	016 650 5357 5	BRACKET
33	SBC925-1C	016 702 7226 0	BUTTON
34	SGL242	016 846 3750 0	ORNAMENT
35	SBC927	016 702 7017 7	BUTTON
36	SBC929	016 702 6998 7	BUTTON
37	SBC926	016 702 6963 8	KNOB
38	XTWS3+10Q	005 501 2293 5	SCREW
39	SHR9094	016 640 0048 1	LATCH
40	XTB3+16J	005 501 2648 8	SCREW
41	SJT390	003 410 7350 5	FUSE HOLDER
42	SJF4442	003 410 5983 6	TERMINAL BOARD
43	SJJ130-2	003 400 7317 2	JACK
44	SMXF16	016 600 0542 6	SHIELD SPACER
45	SJP9205-2Y	003 492 6791 0	SHORTING PIN
46	SJF3065N	003 410 8320 7	TERMINAL PLATE
47	SJF8511N	003 410 8209 5	TERMINAL PLATE
48	SMC1077	016 601 0037 3	INSULATOR
49	SMCF10	016 601 0656 2	SHIELD COVER
50	XTB3+6F	005 501 2687 1	SCREW
51	SHE185	016 918 0330 9	SPACER
52	SKU11650-1	016 802 2190 8	BOTTOM BOARD
53	XTB3+8J	005 501 1535 0	SCREW
54	SKL307	016 828 0325 7	FOOT
55 (XL)	SGPF7-1A	016 840 8189 3	REAR PANEL
55 (EB)	SGPF7-3B	016 840 8212 1	REAR PANEL
55 (EK)	SGPF7B	016 840 8143 7	REAR PANEL
56	SUW3007	016 650 5211 2	BRACKET
57	SJJ130-3	003 400 7580 9	JACK
58	SJS306	003 403 4936 8	CONNECTOR
59	SMCF11	016 601 0657 1	SHIELD COVER
60	XTW3+12TFZ	005 501 4794 1	SCREW
61	XTW3+8TFZ	005 501 2926 5	SCREW
62 ⚠ (EK)	SJS9332B	003 403 7377 5	AC.OUTLET
63 (EB, XL)	SUWF17-2	016 650 5404 5	BRACKET
63 (EK)	SUWF17-3	016 650 5425 0	BRACKET
64 (EK)	SJS9332A	003 403 7376 6	AC.OUTLET COVER
65	SHR127	016 645 0037 9	SPACER, POWER CORD
66 ⚠ (XL)	SJAG23	003 490 1056 4	POWER CORD
66 ⚠ (EB)	SJA138-3	003 490 2575 2	POWER CORD
66 ⚠ (EK)	SJA189	003 490 5448 6	POWER CORD
67 ⚠ (EB)	SJS9225	003 400 3946 5	AC OUTLET
68	SKCUX830-KE	016 800 3219 8	CABINET
70	SNE2095-5	005 500 4884 5	SCREW
71	SHR301	016 645 0044 0	CLAMPER
72	SJS5529	003 400 5928 9	SOCKET(5P)
73	SJT785	003 410 6015 1	CONTACT
74	SJT30741LX-H	003 410 6943 0	TERMINAL PLATE
75	SJT30340LX-V	003 410 6075 9	CONNECTOR(3-P)
75	SJT30540LX-V	003 410 5996 1	CONNECTOR(5-P)
75	SJT30640LX-V	003 410 6149 8	CONNECTOR(6-P)
75	SJT30740LX-V	003 410 5990 7	CONNECTOR(7-P)
76	SJT783	003 410 6001 7	CONTACT
77	SJS5025	003 403 3907 7	CONNECTOR(10-P)
77	SJS5215	003 400 5923 4	CONNECTOR(2-P)
77	SJS5331	003 400 5924 3	CONNECTOR(3-P)
77	SJS5523	003 400 5916 3	CONNECTOR(5-P)
77	SJS5629	003 400 5917 2	CONNECTOR(6-P)
78	SJT3005	003 410 6010 6	CONNECTOR (10-P)
78	SJT3213	003 410 6011 5	CONNECTOR(2-P)
78	SJT3319	003 403 3892 7	CONNECTOR(3-P)
78	SJT3511	003 403 3893 6	CONNECTOR(5-P)
78	SJT3611	003 410 6000 8	CONNECTOR(6-P)
79	SJT30647WL	003 410 8132 9	CONNECTOR
80	SJS50680WL	003 403 7235 8	CONNECTOR
81	LN078396P	001 033 0156 0	L.E.D. ASS'Y

Ref. No.	Part No.	Part Code	Description
PACKINGS			
P1	SPGF12	016 971 5188 6	CARTON BOX
P2	SPSF14	016 977 3375 3	PAD
P3	SPSF15	016 977 3374 4	PAD
P4	SPSF16	016 977 3376 2	PAD
P5	SPSF17	016 977 3377 1	PAD
P6	SPHF3	016 979 0392 4	PACKING SHEET
P7	XZB65X70C02	016 978 0541 4	PROTECTION COVER

Ref. No.	Part No.	Part Code	Description
ACCESSORIES			
A1 (EK)	SQFF13	016 983 5404 1	INSTRUCTION BOOK
A1 (EB)	SQFF15	016 983 5417 6	INSTRUCTION BOOK
A1 (XL)	SQFF17	016 983 5407 8	INSTRUCTION BOOK

■ CABINET PARTS LOCATION



■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time switch the development of new technology)

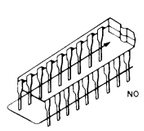
Notes:

1. **S301** : DECK A CrO_2 switch
2. **S302** : DECK A Metal switch
3. **S303** : DECK A Muting switch
4. **S304** : DECK A Rec switch
5. **S305** : DECK A Motor switch
6. **S306** : DECK B ATS switch
7. **S307** : DECK B Muting switch
8. **S308** : DECK B Motor switch
9. **S401** : Editing mode switch in "**off**" position
10. **S402** : Dolby NR switch in "**off**" position
11. **S403** : Beat proof switch in "**A**" position
12. **S501** : Super Bass switch in "**off**" position
13. **S700** : Power switch in "**on**" position
14. **S801~805** : Input selector switch
    [S801: TAPE, S802: AUX
    S803: CD, S804: TUNER
    S805: PHONO]
15. **S806** : Mute switch
16. **S807, 808** : Volume control switch
    [S807: DOWN, S808: UP]
17. **S809, 810** : Balance control switch
    [S809: LEFT, S810: RIGHT]
18. **signal line**
    : Tape playback signal (DECK A)
    : Tape playback signal (DECK B)
    : Tape Record signal
    : R/P signal
    : Positive voltage lines
    : Negative voltage lines
19. Important safety notice:
    Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts. Indicated voltage values are the standard values for the unit in the stop mode measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on internal impedance of the DC circuit tester.

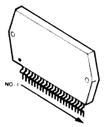
*** Caution!**
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

* Cover the parts boxes made of plastics with alminum foil.
* Ground the soldering iron.
* Put a conductive mat on the work table.
* Do not touch the legs of IC or LSI with the fingers directly.

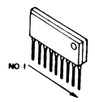
■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES



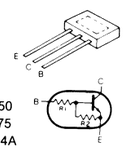
AN6552F AN6558F	8-pin
TC9177P	20-pin
TA7770N	24-pin
TC9163N	28-pin
M50720-408SP	42-pin



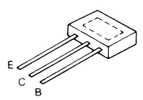
SVI3102A



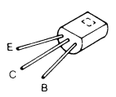
MN6634 9-pin



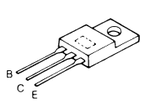
2SD1450
2SA1175
DTC144A
DTC124ESTP
DTA114ESTP



2SC2785F
2SC2784



2SA684, 2SD1512R
2SC1384, 2SD592



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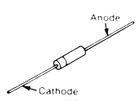
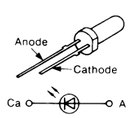
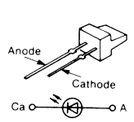


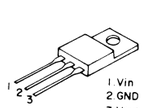
MA4082, MA4062
MA4120



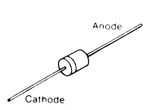
LN078396P



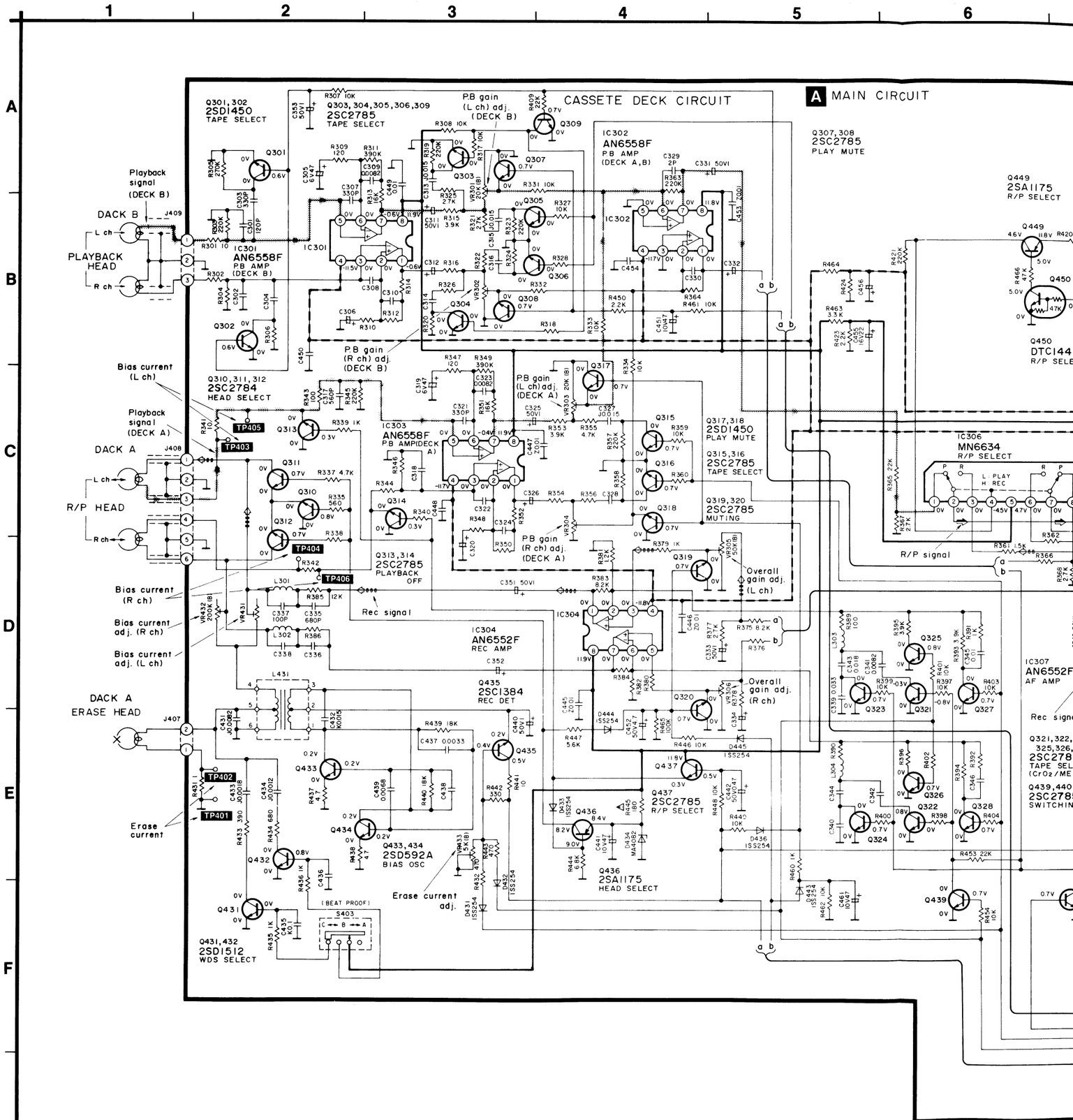
SVGLB74UR3HL

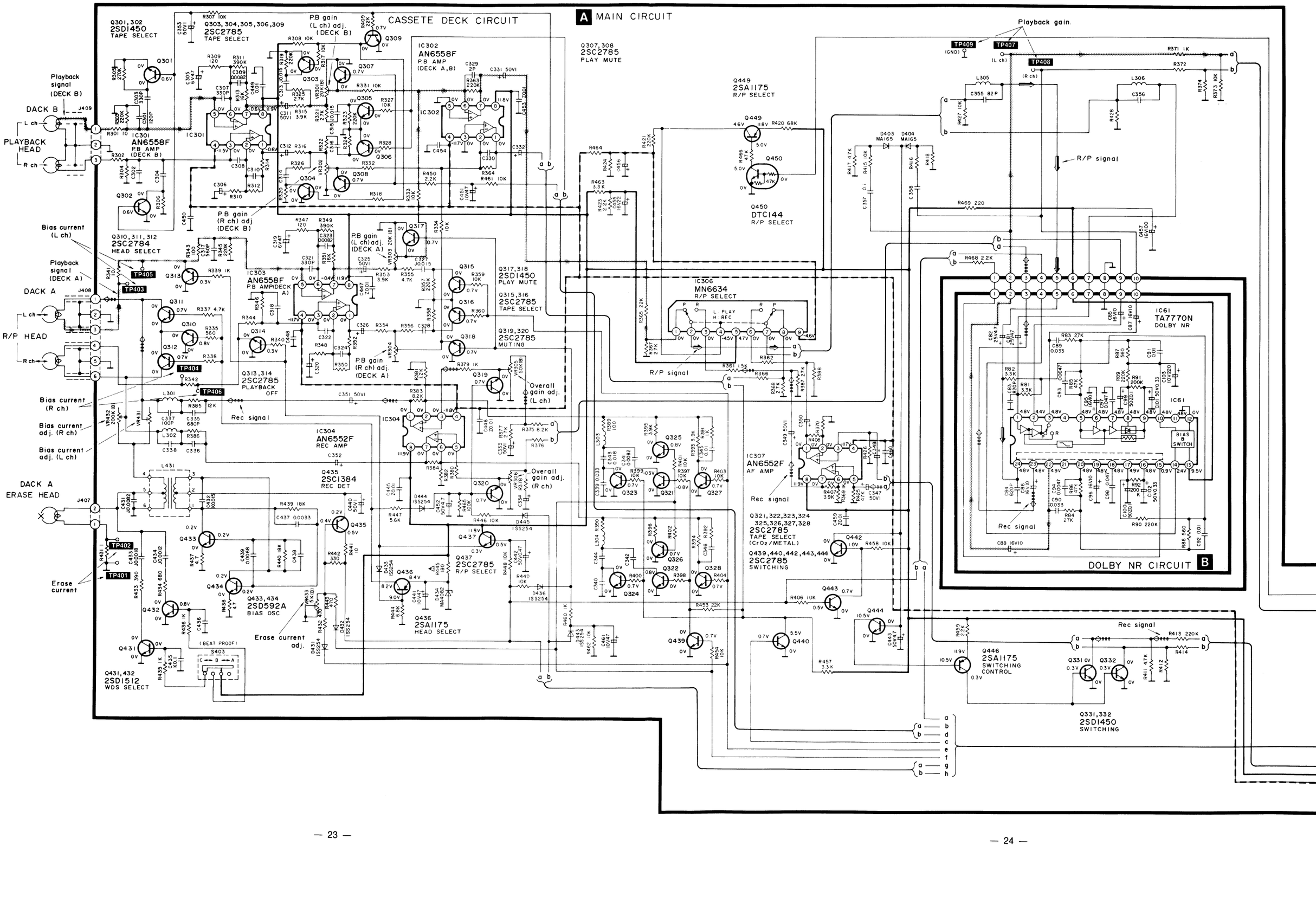


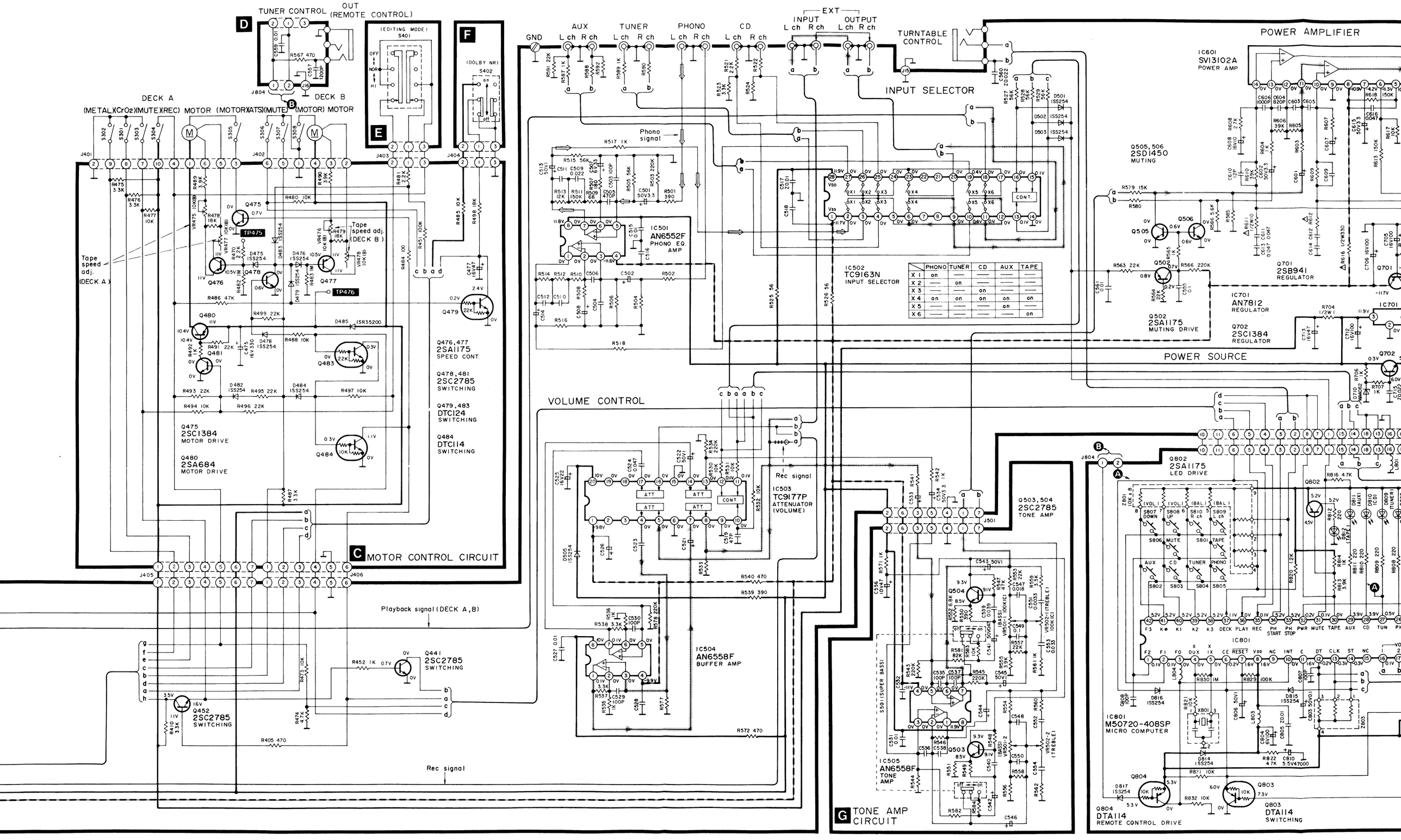
AN7812

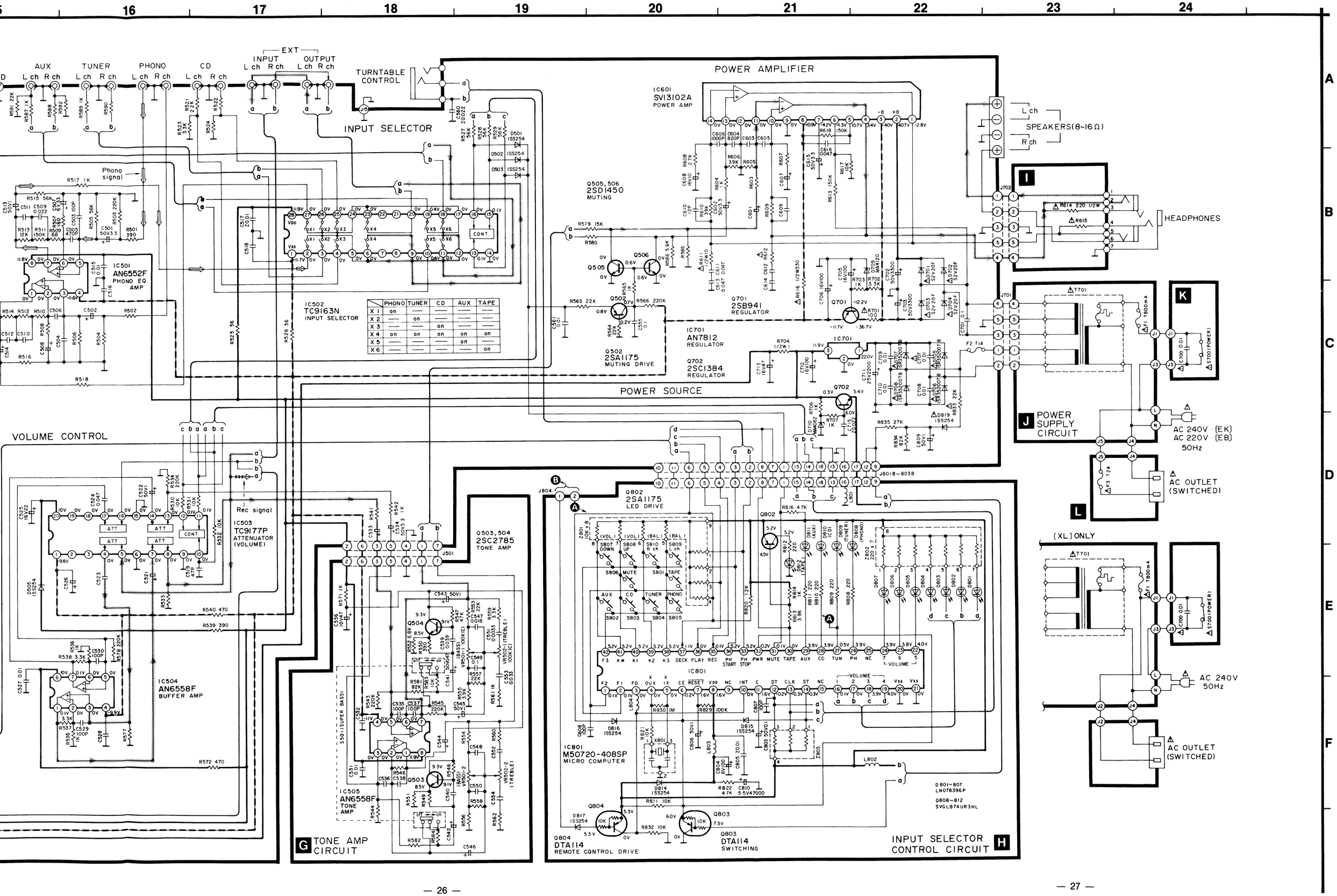


MA165, GP15GLF
SVDISR35200A

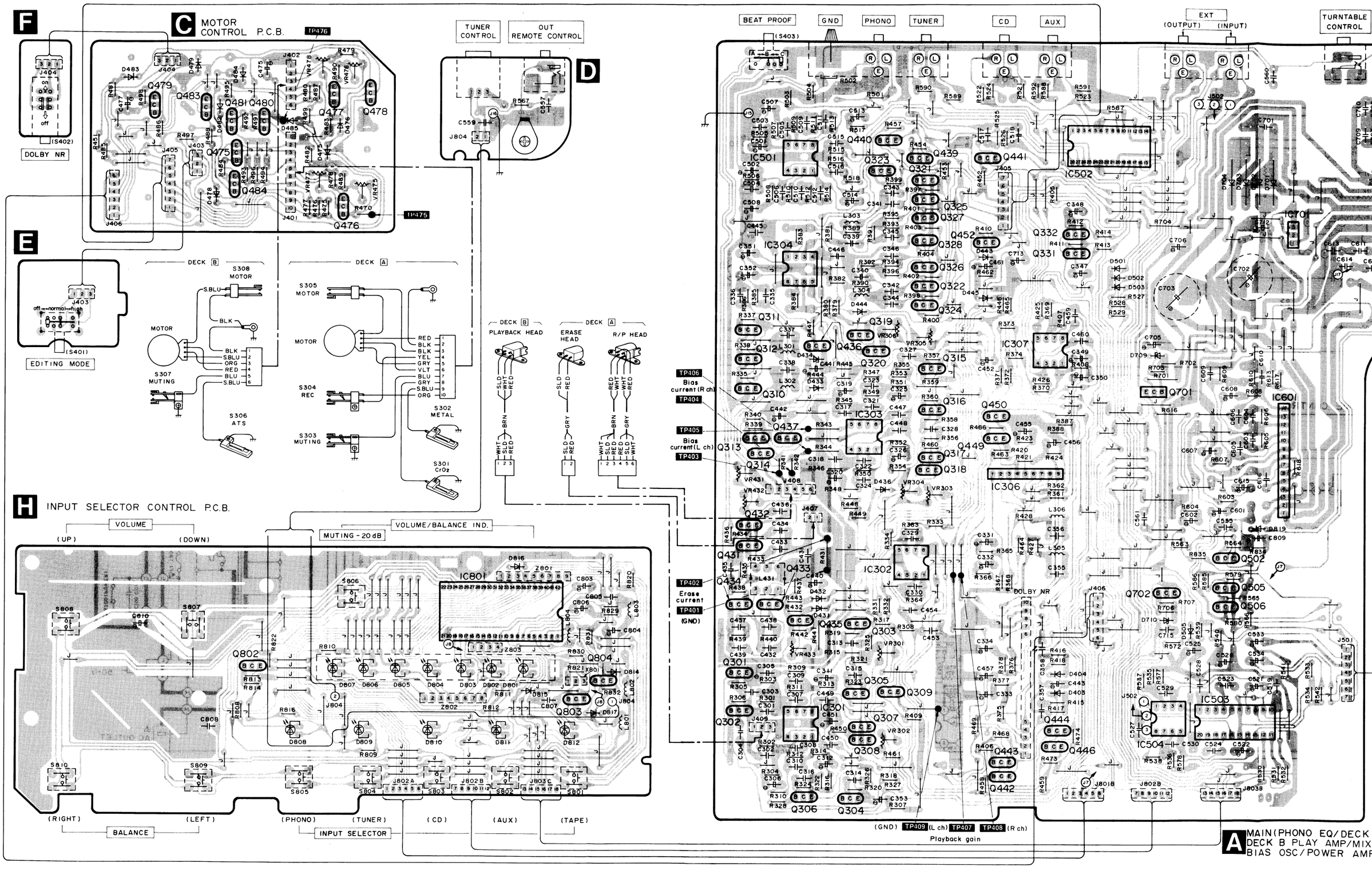



A MAIN CIRCUIT
CASSETE DECK CIRCUIT
DOLBY NR CIRCUIT B
Playback gain.
P.B gain (L ch) adj. (DECK B)
P.B gain (R ch) adj. (DECK B)
P.B gain (L ch) adj. (DECK A)
P.B gain (R ch) adj. (DECK A)
Overall gain adj. (L ch)
Overall gain adj. (R ch)
Playback signal (DECK B)
Playback signal (DECK A)
DACK B
DACK A
PLAYBACK HEAD
R/P HEAD
DACK A ERASE HEAD
Bias current (L ch)
Bias current (R ch)
Bias current adj. (R ch)
Bias current adj. (L ch)
Erase current
Erase current adj.
Rec signal
R/P signal
Q301,302 2SD1450 TAPE SELECT
Q303,304,305,306,309 2SC2785 TAPE SELECT
Q307,308 2SC2785 PLAY MUTE
Q310,311,312 2SC2784 HEAD SELECT
Q313,314 2SC2785 PLAYBACK OFF
Q315,316 2SC2785 TAPE SELECT
Q317,318 2SD1450 PLAY MUTE
Q319,320 2SC2785 MUTING
Q321,322,323,324 325,326,327,328 2SC2785 TAPE SELECT (CrO2/METAL)
Q431,432 2SD1512 WDS SELECT
Q433,434 2SD592A BIAS OSC
Q435 2SC1384 REC DET
Q436 2SA1175 HEAD SELECT
Q437 2SC2785 R/P SELECT
Q439,440,442,443,444 2SC2785 SWITCHING
Q446 2SA1175 SWITCHING CONTROL
Q331,332 2SD1450 SWITCHING
Q449 2SA1175 R/P SELECT
Q450 DTC144 R/P SELECT
IC301 AN6558F P.B AMP (DECK B)
IC302 AN6558F P.B AMP (DECK A,B)
IC303 AN6558F P.B AMP(DECK A)
IC304 AN6552F REC AMP
IC306 MN6634 R/P SELECT
IC307 AN6552F AF AMP
IC61 TA7770N DOLBY NR
TP401 TP402 TP403 TP404 TP405 TP406 TP407 TP408 TP409 (GND)
(BEAT PROOF)
BIAS B SWITCH


TUNER CONTROL
OUT
(REMOTE CONTROL)
D
(EDITING MODE)
S401
OFF
NOR
HI
E
F
(DOLBY NR)
S402
DECK A
(METAL)(CrO2)(MUTE)(REC) MOTOR (MOTOR)(ATS)(MUTE)
B
(MOTOR) MOTOR
DECK B
J804
J401
J402
J403
J404
J405
J406
Tape speed adj. (DECK A)
Tape speed adj. (DECK B)
TP475
TP476
Q475
Q476
Q477
Q478
Q479
Q480
Q481
Q483
Q484
Q475
2SC1384
MOTOR DRIVE
Q480
2SA684
MOTOR DRIVE
Q476,477
2SA1175
SPEED CONT.
Q478,481
2SC2785
SWITCHING
Q479,483
DTC124
SWITCHING
Q484
DTC114
SWITCHING
C MOTOR CONTROL CIRCUIT
Playback signal (DECK A,B)
Q441
2SC2785
SWITCHING
Q452
2SC2785
SWITCHING
Rec signal
GND
AUX
TUNER
PHONO
CD
EXT
INPUT
OUTPUT
TURNTABLE CONTROL
INPUT SELECTOR
Phono signal
IC501
AN6552F
PHONO EQ. AMP
IC502
TC9163N
INPUT SELECTOR
PHONO TUNER CD AUX TAPE
X1 on
X2 on
X3 on
X4 on on on on
X5 on
X6 on
VOLUME CONTROL
IC503
TC9177P
ATTENUATOR (VOLUME)
IC504
AN6558F
BUFFER AMP
Rec signal
POWER AMPLIFIER
IC601
SVI3102A
POWER AMP
Q505,506
2SD1450
MUTING
Q505
Q506
Q502
2SA1175
MUTING DRIVE
POWER SOURCE
Q701
2SB941
REGULATOR
IC701
AN7812
REGULATOR
Q702
2SC1384
REGULATOR
Q503,504
2SC2785
TONE AMP
J501
IC505
AN6558F
TONE AMP
G TONE AMP CIRCUIT
IC801
M50720-408SP
MICRO COMPUTER
Q802
2SA1175
LED DRIVE
Q804
DTA114
REMOTE CONTROL DRIVE
Q803
DTA114
SWITCHING


16
17
18
19
20
21
22
23
24
A
B
C
D
E
F
AUX
TUNER
PHONO
CD
EXT
INPUT
OUTPUT
TURNTABLE CONTROL
INPUT SELECTOR
Phono signal
IC501
AN6552F
PHONO EQ. AMP
IC502
TC9163N
INPUT SELECTOR
IC503
TC9177P
ATTENUATOR (VOLUME)
VOLUME CONTROL
Rec signal
IC504
AN6558F
BUFFER AMP
IC505
AN6558F
TONE AMP
Q503,504
2SC2785
TONE AMP
G TONE AMP CIRCUIT
POWER AMPLIFIER
IC601
SVI3102A
POWER AMP
Q505,506
2SD1450
MUTING
Q502
2SA1175
MUTING DRIVE
Q506
Q505
Q701
2SB941
REGULATOR
IC701
AN7812
REGULATOR
Q702
2SC1384
REGULATOR
POWER SOURCE
L ch
R ch
SPEAKERS(8~16Ω)
HEADPHONES
I
J POWER SUPPLY CIRCUIT
K
L
AC 240V (EK)
AC 220V (EB)
50Hz
AC OUTLET (SWITCHED)
(XL) ONLY
AC 240V
50Hz
AC OUTLET (SWITCHED)
IC801
M50720-408SP
MICRO COMPUTER
Q802
2SA1175
LED DRIVE
Q804
DTA114
REMOTE CONTROL DRIVE
Q803
DTA114
SWITCHING
INPUT SELECTOR CONTROL CIRCUIT H
D801~807
LN078396P
D808~812
SVGLB74UR3HL
CONT.
ATT
CONT
PHONO
TUNER
CD
AUX
TAPE
MUTE
DECK
PLAY
REC
PWR
VOLUME

■ PRINTED CIRCUIT BOARDS



5 6 7 8 9 10 11 12 13 14

OUT
REMOTE CONTROL

D

BEAT PROOF (S403) GND PHONO TUNER CD AUX

EXT (OUTPUT) (INPUT)

TURNTABLE CONTROL

SPEAKERS(8~16Ω) R ch L ch

L

AC OUTLET (SWITCHED)

(XL)ONLY

AC OUTLET (SWITCHED)

AC IN
(EB) ..... (220V 50Hz)
(EK, XL) (240V 50Hz)

BRN

S.BLU

BRN

C700

(S700)

POWER

K POWER SWITCH P.C.B.

T701 (Power transformer)

F1 T800mA

L

N

J701

J702

PHONES

I HEADPHONES JACK P.C.B.

B DOLBY NR P.C.B.

J POWER SUPPLY P.C.B.

IC61

DECK B — PLAYBACK HEAD

DECK A — ERASE HEAD, R/P HEAD

SLD RED WHT BRN GRY

TP406 Bias current (R ch)
TP404
TP405 Bias current (L ch)
TP403
TP402 Erase current
TP401 (GND)

IC501 IC502 IC304 IC303 IC307 IC306 IC302 IC301 IC701 IC601 IC503 IC504

Q440 Q439 Q441 Q323 Q321 Q325 Q327 Q452 Q328 Q326 Q322 Q324 Q332 Q331 Q311 Q319 Q312 Q436 Q320 Q315 Q310 Q316 Q450 Q437 Q313 Q317 Q449 Q318 Q314 Q432 Q431 Q433 Q434 Q435 Q303 Q301 Q305 Q309 Q302 Q307 Q308 Q306 Q304 Q701 Q702 Q502 Q505 Q506 Q444 Q443 Q446 Q442

D501 D502 D503 D709 D710 D715 D819

(AUX) (TAPE)

(GND) TP409 (L ch) TP407 TP408 (R ch)
Playback gain

A MAIN (PHONO EQ/DECK A PLAY AMP/ DECK B PLAY AMP/MIX AMP/REC AMP/ BIAS OSC/POWER AMP/POWER SUPPLY) P.C.B.

G TONE AMP P.C.B.

BASS TREBLE SUPER BASS (S501)

IC505

VR501-1 VR501-2 VR502-1 VR502-2 VR502

Q503 Q504

Printed in Japan
S870606000HS/HM/MT

ORDER NO. HAD8707214A2

Service Manual

Amplifier

SU-X830

Color

(K) ..... Black Type

Area

Color	Areas
(K)	[EH].... Holland
(K)	[EF] .... France
(K)	[Ei] ..... Italy
(K)	[E] ..... Continental Europe

Please use this manual together with the service manual for Model No. SU-X830, Order No. HAD8705149C8.

Note: Mentioned in this service manual are the differences from Model No. SU-X830 for the destination [EK] area.

CHANGES

■ REPLACEMENT PARTS LIST

Notes: * Mentioned in this parts list are only those different from Model No. SU-X830 for the destination [EK] area. Other parts are the same as for Model No. SU-X830 for the destination [EK] area.
* Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

Ref. No.	Change of Part No. [EK] ➡ [EH, EF, Ei, E]		Part Name & Description	Remarks
FUSES				
F3 ⚠	———	**XBA2C20TB0**	FUSE, 250V, T2A	Addition
COILS AND TRANSFORMERS				
T1 ⚠	SLTF5M14-W	**SLTF5M15-W**	POWER TRANSFORMER	
CABINET AND CHASSIS				
55	SGPF7B	**SGPF7-3B [EH, EF, Ei]**	REAR PANEL	
55	SGPF7B	**SGPF7-3D [E]**	REAR PANEL	
62 ⚠	SJS9332B	**SJS9225**	AC OUTLET	
63	SUWF17-3	**SUWF17-2**	BRACKET	
64	SJA9332A	———	AC OUTLET COVER	Deletion
66 ⚠	SJA189	**SFDAB31E01**	AC POWER CORD	
ACCESSORIES				
A1	SQFF13	**SQFF15 [EH, E]**	INSTRUCTION BOOK	
A1	SQFF13	**SQFF22 [EF]**	INSTRUCTION BOOK	
A1	SQFF13	**SQFF20 [Ei]**	INSTRUCTION BOOK	
PACKINGS				
P1	SPGF12	**SPGF14 [EF]**	CARTON BOX	

Technics

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